UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTERNATIONAL BUSINESS MACHINES CORP.,
Petitioner

v.

GROUPON, INC.,
Patent Owner

Case [[UNASSIGNED]]

U.S. Patent No. 7,856,360
TITLE: SYSTEM FOR PROVIDING A SERVICE TO VENUES WHERE PEOPLE AGGREGATE
Issue Date: December 21, 2010

DECLARATION OF SUSAN SPIELMAN
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>INTRODUCTION</td>
<td>14</td>
</tr>
<tr>
<td>II.</td>
<td>BASES FOR OPINIONS</td>
<td>14</td>
</tr>
<tr>
<td>III.</td>
<td>MATERIALS REVIEWED</td>
<td>15</td>
</tr>
<tr>
<td>IV.</td>
<td>EDUCATION AND EXPERIENCE</td>
<td>16</td>
</tr>
<tr>
<td>A.</td>
<td>Overview</td>
<td>16</td>
</tr>
<tr>
<td>B.</td>
<td>Experience With Mobile Application Development, Location-Based Services, Social Networking, And Other Technologies Relevant To The ’360 Patent</td>
<td>20</td>
</tr>
<tr>
<td>V.</td>
<td>LEGAL STANDARDS</td>
<td>24</td>
</tr>
<tr>
<td>A.</td>
<td>Anticipation</td>
<td>25</td>
</tr>
<tr>
<td>B.</td>
<td>Obviousness</td>
<td>25</td>
</tr>
<tr>
<td>C.</td>
<td>Claim Construction</td>
<td>30</td>
</tr>
<tr>
<td>VI.</td>
<td>LEVEL OF ORDINARY SKILL IN THE ART</td>
<td>31</td>
</tr>
<tr>
<td>VII.</td>
<td>TECHNICAL BACKGROUND</td>
<td>32</td>
</tr>
<tr>
<td>A.</td>
<td>Mobile Location-Based Services</td>
<td>32</td>
</tr>
<tr>
<td>B.</td>
<td>Social Networking</td>
<td>33</td>
</tr>
<tr>
<td>C.</td>
<td>Mobile Social Software</td>
<td>34</td>
</tr>
<tr>
<td>VIII.</td>
<td>CLAIM CONSTRUCTION</td>
<td>35</td>
</tr>
<tr>
<td>A.</td>
<td>“or” (Claims 1-3, 7, 8, 11, 12, 14-16, 22, 27, 29, 30, 33, 41, 45, 46, 52)</td>
<td>35</td>
</tr>
<tr>
<td>B.</td>
<td>“said system comprising members” (Claims 1, 3, 22, 27)</td>
<td>37</td>
</tr>
</tbody>
</table>
C. “said system/method requiring at least one member to attend a venue” (Claims 1, 2, 3, 22, 27, 52) .................................................................37

D. “consisting of (1)” (Claim 23) / “consisting of (2)” (Claim 24) .......37

E. “wherein said indicating does not comprise a request to receive said reward” (Claim 49) .................................................................38

IX. OVERVIEW OF CROWLEY .................................................................38

X. OVERVIEW OF CALLEGARI .................................................................41

XI. OPINIONS ABOUT INVALIDITY OF THE CHALLENGED CLAIMS .......................................................................................................45

A. Claims 1, 2, 22-24, 27, 33-35, 41, 42, 45, 46, 49, and 52 Are Obvious Over Crowley .................................................................45

1. Claim 1, Branch (2), Sub-Branch (2)(A) ........................................45

   i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising: .................................................................46

   ii. a data processor, said data processor: .................................49

   iii. Branch (2): comprising information of a reward; ..............52

   iv. performing in the following order: prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue; ..............................................................53

   v. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable; ..............................................................58
vi. Sub-Branch (2)(A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and ..................................60

vii. communicating to a recipient said processed data. ........61

2. Claim 2, Branch (2), Sub-Branch (2)(A) ..............................63

i. Preamble: A method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor .......................................................................................64

ii. Branch (2): comprising information of a reward; ............65

iii. performing in the following order: prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue; .........................................................65

iv. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable; ........................................................................................................66

v. Sub-Branch (2)(A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and ..................................66
vi. communicating to a recipient said processed data. ............66

3. Claim 22 .................................................................................................67

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising: .................................................................67

ii. a data processor, said data processor: .................................67

iii. receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue, ...........68

iv. said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device;.. .................................................................70

v. correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue; and.......................72

vi. communicating to a recipient said demographic of attendees at said venue.................................................................76

4. Claim 23 .................................................................................................77

i. A system according to claim 22.....................................................77

ii. consisting of (1). ...........................................................................77

5. Claim 24 .................................................................................................78

i. A system according to claim 22.....................................................78

ii. consisting of (2). ...........................................................................78
6. Claim 27, Branch (A) ........................................................................80

   i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising: ...........................................................................................................80

   ii. a data processor, said data processor: .........................................81

   iii. comprising information of a reward; .........................................81

   iv. performing in the following order: prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue; ...........................................................................................................81

   v. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable; ...........................................................................................................82

   vi. Branch (A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and ...........................................................................................................82

   vii. communicating to a recipient said processed data. ........83

7. Claim 33 ...........................................................................................................83

   i. A system according to Claim 27, ....................................................83

   ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device. .......83
8. Claim 34 ........................................................................................................83
   i. A system according to Claim 27, .................................................................83
   ii. wherein said data processor transmits to said mobile communication device that said reward is receivable. ........84
9. Claim 35 ........................................................................................................84
   i. A system according to claim 27, .................................................................85
   ii. wherein said indicating comprises a checkin.................................85
10. Claim 41 ......................................................................................................87
    i. A system according to Claim 27, ...............................................................87
    ii. wherein said reward is provided by said venue or a sponsor, said reward receivable at said venue.................................87
11. Claim 42 ......................................................................................................88
    i. A system according to Claim 27, ...............................................................88
    ii. wherein said reward is provided by said organization......88
12. Claim 45 ......................................................................................................89
    i. A system according to Claim 27, ...............................................................89
    ii. wherein said informing is for: (a) providing trait information, (b) providing behavior information, (c) providing location information, (d) providing a demographic of attendees, (e) providing characteristic information, (f) accepting a venue's promotion, (g) accepting a sponsor's promotion, (h) recruiting new members or (i) having become a member of said organization.................................................................89
13. Claim 46 ......................................................................................................91
    i. A system according to Claim 27, ...............................................................91
ii. wherein said reward comprises promotional material, rewards points, a game, cash, credit, a coupon, a discount or organization honors. ................................................................. 92

14. Claim 49 ................................................................................................................. 92

i. A system according to Claim 27, ............................................................. 92

ii. wherein said indicating does not comprise a request to receive said reward .............................................................................................................. 93

15. Claim 52, Branch (A) ........................................................................... 95

i. Preamble: A method for providing a service to venues where people aggregate, said method employing members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor comprising information of a reward, said data processor performing in the following order:...
.................................................................................................................................. 95

ii. prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue; .................. 97

iii. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable; ........................................................................................................ 98

iv. Branch (A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and .................................................. 98

v. communicating to a recipient said processed data. .................. 98
B. Claims 1-3, 7, 8, 11-16, and 22-24 Are Obvious Over Callegari. .......

1. Claim 1, Branch (1), Sub-Branch (1)(A) ..............................................

   i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising: .................................................................

   ii. a data processor, said data processor: .................................

   iii. Branch (1): receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and ..................................................

   iv. Sub-Branch (1)(A): processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and .................................................................

   v. communicating to a recipient said processed data. ............

2. Claim 2, Branch (1), Sub-Branch (1)(A) .................................

   i. Preamble: A method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor .................................................................
ii. Branch (1): receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and ......................................................115

iii. Sub-Branch (1)(A): processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and ..........................................................................................116

iv. communicating to a recipient said processed data. ............117

3. Claim 3, Branch (A).................................................................117

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising: ..............................................................................117

ii. a data processor, said data processor: ...............................118

iii. receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and ...............................................................................118

iv. Branch (A): processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile
communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and .................................................................118

v. communicating to a recipient said processed data........119

4. Claim 7.....................................................................................119
   i. A system according to Claim 3,.................................120
   ii. wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for the present time.................................120

5. Claim 8.....................................................................................121
   i. A system according to Claim 3,.................................121
   ii. wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for a recent time........................................122

6. Claim 11..................................................................................122
   i. A system according to claim 3,.................................122
   ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device. ...123

7. Claim 12..................................................................................124
   i. A system according to claim 3,.................................124
   ii. wherein said data processor comprises information of a reward and informs said member of said reward receivable by said member for (a) providing said trait information, (b) providing said real-time data, (c) providing said demographic of attendees, (d) providing said characteristic of said venue, (e) accepting a venue's promotion, (f) accepting a sponsor's
promotion, (g) recruiting new members or (h) having become a member of said organization.................................125

8. Claim 13..................................................................................................................126
   i. A system according to claim 12,.........................................................126
   ii. wherein said reward is receivable at said venue...............126

9. Claim 14..................................................................................................................127
   i. A system according to claim 13,.........................................................127
   ii. wherein said reward comprises promotional material, rewards points, cash, credit, a coupon, a discount or organization honors..........................................................127

10. Claim 15.................................................................................................................129
    i. A system according to claim 14,.........................................................129
    ii. wherein said promotional material comprises, or said rewards points are used to receive, drink specials, cover charge discounts, access to VIP lounges, transportation offers, parking specials, food specials, merchandise offers, lodging specials, music downloads, passes to events or retail gift cards. ........129

11. Claim 16.................................................................................................................131
    i. A system according to claim 15,.........................................................131
    ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device. ......131

12. Claim 22.................................................................................................................131
    i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system
requiring at least one member to attend a venue, said system comprising:

ii. a data processor, said data processor:

iii. receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue,

iv. said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device;

v. correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue; and

vi. communicating to a recipient said demographic of attendees at said venue.

13. Claim 23

14. Claim 24

C. Secondary Considerations

XII. APPENDIX A: THE CHALLENGED CLAIMS OF THE ’360 PATENT
I, Susan Spielman, a resident of Durango, Colorado over 18 years of age, hereby declare as follows:

1. I have personal knowledge of all of the matters about which I testify in this declaration.

2. Desmarais LLP retained me on behalf of International Business Machines Corp. (“IBM”) to provide my technical opinions and testimony about Claims 1-3, 7, 8, 11-16, 22-24, 27, 29, 30, 33-35, 41, 42, 45, 46, 49 and 52 of U.S. Patent No. 7,856,360 (“the ’360 Patent”). I refer to those claims as the “challenged claims.” The full text of the challenged claims appears in Appendix A to my declaration.

3. I am being compensated for my work in this proceeding and receiving reimbursement for expenses incurred in the course of my work. My compensation is not contingent in any way on either the opinions I have reached or the outcome of this case.

II. BASES FOR OPINIONS

4. I have reviewed and considered the documents and other materials listed below in Section III in light of my specialized knowledge provided by my education, training, research, and experience, as summarized in Section IV and described in detail in my CV, which is provided as Appendix B to this declaration.
My analysis of those materials, combined with the specialized knowledge that I have obtained over the course of my education and career, form the bases for my opinions in this declaration.

III. MATERIALS REVIEWED

5. I have reviewed, analyzed, and relied upon the following materials in reaching my opinions in this matter:

- The ’360 Patent (Ex. 1101);
- The file history of the ’360 Patent (Ex. 1102);
- U.S. Provisional Patent App. No. 60/723,021 to Rosenberg (Ex. 1104, the “Rosenberg Provisional”), which is the provisional application to which U.S. Patent App. Pub. No. US2006/0195361 A1 claims priority;
- U.S. Patent No. 5,697,844 to Von Kohorn (Ex. 1107, “Von Kohorn”);
IV. EDUCATION AND EXPERIENCE

6. Below, I provide a summary of my education and experience. I describe my education, experience, and publications in greater detail in my CV, attached as Appendix B.

A. Overview

7. I am an enterprise software systems and mobile application consulting engineer by training and practice. I hold a Master of Science degree in Computer Information Systems from Boston University and Bachelor of Science degree in Computer Science from Stony Brook University.
8. Since the beginning of my professional career in the mid-1980s, my career has focused on distributed computing, including developing business applications in mobile environments. Specifically, I have written software and coded in many procedural and object-oriented languages, including assembly, C, C++, Java, and J2ME (Java 2 Platform, Micro Edition), among others. I have architected, designed, and implemented hundreds of products using a wide variety of technologies. Positions I have held at various companies in the software industry include chief technology officer, director of engineering business development, senior design engineer, principal engineer, technical liaison, and technical manager.

9. I am currently the President and Senior Consulting Engineer of Switchback Software LLC, a Colorado-based consulting firm that specializes in enterprise and mobile application development. My company was formed over 15 years ago and continues to provide expert services for full product development concerning all aspects of enterprise level and mobile application development to companies around the country.

10. Prior to founding Switchback Software, I was a Senior Design Engineer, and later the Director of Engineering Business Development at OneWave, Inc. My work at OneWave involved designing and implementing a multi-threaded distributed enterprise application that included a DCOM-based
(distributed component object model-based) integration server for the Windows NT platform. This project involved extensive use of both C++ and Java languages, Integrated Development Environments, general object-oriented design principles, and a component-based design model. My engineering work also included the design of component models, user lifecycle management and security, distributed enterprise communication systems, remote invocations, database interaction, and runtime object and component management. The product I worked on was the backbone of OneWave's business strategy, and the company went public upon the successful launch of this product.

11. Prior to my work at OneWave, I was a Principal Software Engineer at a company called Banyan Systems, Inc. My work at Banyan included the design for a distributed RPC (remote procedure call) technology using a client/server model, as well as user management that included security and permissioning for protected network resources.

12. I have been engaged by industry-leading companies to perform technical consulting work for enterprise development, including distributed computing. For instance, I have been engaged by Sun Microsystems to implement a distributed Java system for tracking defect management and inventory control in Sun's worldwide distribution channels. I was selected as one of a small number of
industrial experts to generate and provide content, including technical content, for java.net, a portal focused on all aspects of enterprise and Java development.

13. I have also been a featured and requested speaker at well-known industry conferences on enterprise technologies, including a variety of subjects such as mobile computing and distributed computing. Those included both domestic and international conferences, such as: Borland International Developers Conference (BorCon) 2002-2004, O'Reilly Conference on Enterprise Java, technical presentations at over 50 No Fluff Just Stuff Java conferences throughout the U.S., and Denmark JAOO (Java Architecture Object-oriented) Conference.

14. I have published over thirty industry articles in the field of enterprise development and have authored four enterprise-level web development technology books. Those books include three books about technologies involved in this case and relevant to mobile application development: JSTL: PRACTICAL GUIDE FOR JSP PROGRAMMERS; THE STRUTS FRAMEWORK: PRACTICAL GUIDE FOR JAVA PROGRAMMERS; and PRO J2EE 1.4 PROFESSIONAL TO EXPERT, which was a definitive guide for Java backend developers. A list of my publications is included in my CV in Appendix B.

15. In addition, nearly every major publisher in the technology industry has requested me to provide expert review of various technology manuscripts, including manuscripts in the fields of enterprise, object-oriented component
programming, database, and mobile-computing-related technologies. For instance, I was selected to be a technical reviewer for the *Distributed Java Technologies* technical reference book published by Prentice Hall and *Voice Enabled Web Applications: VoiceXML and Beyond* published by Apress.

**B. Experience With Mobile Application Development, Location-Based Services, Social Networking, And Other Technologies Relevant To The ’360 Patent**

16. I have significant first-hand experience with the technologies involved in the ’360 Patent. My company, Switchback Software, has regularly consulted on mobile application development for the past fifteen years. My work has included being one of the first companies to provide a J2ME-based product for end-users, creating a mobile development platform for developers and providing advanced training for engineers on how to create mobile applications based on Location Based Services using GPS on devices. I have also consulted on international mobile application roll-outs.

17. From 2002-2004, I was the Founder and CEO/CTO for Mobilogics LLC, a company created specifically for providing location-based services/GIS based mobile development. My work at Mobilogics LLC included architecting, designing, and implementing one of the first industry applications making use of the mobile development environment for location-based services (LBS) with Motorola mobile phones. The application coupled the use of LBS on a mobile
device with ESRI\textsuperscript{1}-based ArcGIS location tracking systems on both the web and the mobile device. I worked closely with ESRI and their development staff as, to the best of my knowledge, this was one of the first applications being implemented using both mobile and enterprise technologies.

18. The application that Mobilogics developed was sold to the City of Denver to support the Water Management Division. It allowed real-time tracking of all the division’s maintenance trucks in the field and simultaneously displayed mapping updates to administrators on web browsers. Maps were created that showed where all trucks were at any given time and allowed for filtering on the part of the administrator if they wished to zoom in on any attribute of a particular fleet. For example, an administrator could make the map show all of the repair trucks out on calls and their location, or show all of the trucks that have been at one location longer than 30 minutes. There were also mapping components sent to the actual device for routes that might be specified by their administrators.

19. The creation of the Mobilogics LBS application also led to the development of a “one-touch” platform that was later used by other development

\textsuperscript{1} ESRI stands for Environmental Systems Research Institute, an international supplier of geographic information system (GIS) software, webGIS and geodatabase management applications.
teams as well as the boot-camp that helped other engineers come up to speed quickly and efficiently for mobile development.

20. In addition to Mobilogics LLC, I was also the Founder and CTO of bSocial Networks Inc. from 2004-2012, which was the first integration of social networking and ecommerce. This was a product offering that attempted to combine Business to Business (B2B), Business to Consumer (B2C), and Consumer to Consumer (C2C) transactions. I was the architect and designer for bSocial Networks’ product, called MarketLodge, which was an integration with the emerging Facebook APIs, integration of ecommerce aspects such a payment and authorizations, and backend enterprise resource planning inventory management. Additionally, I managed an international development team for the delivery of this product.

21. MarketLodge allowed for social networking participants to make recommendations for products they liked to their friends, and their friends, in turn, would be able to purchase that product directly from an appropriate vendor. The friend making the recommendation would then get a percentage of the sale, and the vendor would make a new sale based on the aspects of social networking recommendation. It was also possible for the vendor to offer coupons to the purchaser because they knew that the purchase was initiated through a social network recommendation.
22. I also have significant experience with J2ME, the Java programming language micro edition platform frequently used in mobile application development in the early 2000s. J2ME is a subset and scaled down version of the full standard Java runtime (J2SE). By 2004, there were over two hundred and fifty million devices that utilized the J2ME platform.2

23. J2ME provides an architecture well-suited for mobile development and allows for optional packages to be used such as location and web services application programming interfaces (APIs). There was a growing necessity for a lightweight, cross-platform, and high performance environment that would run on various devices, and J2ME was the leading industry platform at the time.

24. J2ME provided the development environment and functionality that allowed developers who were already familiar with the Java language and runtime to quickly and fairly easily start creating mobile applications. J2ME has variations from the standard Java runtime including: the addition of profile definitions, connected device configurations, and a specific Java Virtual Machine called the

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KVM to name a few. The similarities of standard Java allowed developers on mobile devices to easily create applications on the growing variety of devices.

25. I also created an industry leading engineering boot-camp specifically for those who would be embarking on mobile development using J2ME. This boot-camp was presented at both conferences and purchased by companies and engineering teams. A copy of a presentation I gave on mobile development using J2ME at a development conference in Denmark in 2004 is attached as Appendix C.

26. As another, more recent example of my experience with mobile application development, I have consulted on the 2013 roll-out of an international company’s mobile application offering requiring user selection and mapped data filtering for Android and iOS7 devices.

V. LEGAL STANDARDS

27. IBM’s attorneys have explained to me the legal standards that apply in this case. My understanding of those standards is described below. I am not an attorney, and I do not have formal training in the law regarding patents. I have used my understanding of the following legal principles set forth in this section in reaching my opinions.

28. I understand that in this proceeding, IBM has the burden of proving that the challenged claims are invalid by a preponderance of the evidence.
A. Anticipation

29. I understand that to anticipate a claim of a patent, a prior art reference must disclose, either expressly or inherently, all limitations of a claim as those limitations are arranged in the claim.

30. I understand that for a reference to anticipate a claim, the reference must disclose the relevant technology in a manner such that a person of ordinary skill in the relevant art would be able to carry out or utilize the technology that the reference describes without having to undertake undue experimentation.

31. I understand that a limitation is disclosed inherently in a reference only if it is necessarily present in the process or product described in the prior art reference. I understand that probabilities or possibilities are insufficient to show that a prior art reference inherently discloses something beyond what it discloses explicitly.

B. Obviousness

32. I understand that under 35 U.S.C. § 103, “[a] patent for a claimed invention may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”
33. When considering the issues of obviousness, I understand that I am to do the following:

- Determine the scope and content of the prior art;
- Ascertain the differences between the prior art and the claims at issue;
- Resolve the level of ordinary skill in the pertinent art;
- Consider evidence of secondary indicia of non-obviousness (if available); and
- Consider whether the subject matter of the claim as a whole would have been obvious to a person of ordinary skill in the art.

34. I understand that a prior art reference may be combined with other references to disclose each element of the invention under § 103. I understand that a reference may also be combined with the knowledge of a person of ordinary skill in the art, and that this knowledge may also be used to combine multiple references. I further understand that a person of ordinary skill in the art is presumed to know the relevant prior art. I understand that the obviousness analysis may take into account the inferences and creative steps that a person of ordinary skill in the art would employ.

35. In assessing obviousness, I understand that the following principles should be considered:
A combination of familiar elements according to known methods is likely to be obvious if it yields predictable results;

- The substitution of one known element for another is likely to be obvious if it yields predictable results;

- The use of a known technique to improve similar items or methods in the same way is likely to be obvious if it yields predictable results;

- The application of a known technique to a prior art reference that is ready for improvement, to yield predictable results;

- Any need or problem known in the field and addressed by the reference can provide a reason for combining the elements in the manner claimed; and

- The proper analysis of obviousness requires a determination of whether a person of ordinary skill in the art would have a “reasonable expectation of success” (not “absolute predictability” of success) in achieving the claimed invention by combining prior art references.

36. I am informed that obviousness should not be determined using hindsight; rather, the inquiry must be from the perspective of a person of ordinary skill in the art at the time that the invention was made. While there is no requirement that the prior art contain an express suggestion to combine known elements to achieve the claimed invention, a suggestion to combine known
elements to achieve the claimed invention may come from the prior art as a whole or individually, and will be viewed in light of the knowledge of one skilled in the art. The inferences and creative steps a person of ordinary skill in the art would typically employ are also relevant to the determination of obviousness.

37. When a work is available in one field, design alternatives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation and would see the benefit of doing so, that variation is likely to be obvious. When there is a design need or market pressure and there are a finite number of predictable solutions, a person of ordinary skill in the art has good reason to pursue those known options.

38. It is my understanding that there is no rigid rule that a reference or combination of references must contain a “teaching, suggestion, or motivation” to combine references. But, I understand that a “teaching, suggestion, or motivation” can be a useful guide in establishing a rationale for combining elements of the prior art.

39. With respect to secondary indicia of non-obviousness, I have been informed that such evidence may include the following:
Commercial success: It is my understanding that a strong showing of commercial success that can be attributed to the merits of the invention should be considered an indication of non-obviousness.

Copying: It is my understanding that evidence that an accused party copied a specific product embodying the patent, as opposed to a prior art device, is an indication of non-obviousness.

Long-standing problem or need: It is my understanding that evidence of a persistent problem or need in the art that was resolved by the patented invention is an indication of non-obviousness.

Prior failure: It is my understanding that evidence that others have tried and failed to solve the problem or provide the need resolved by the claimed invention is an indication of non-obviousness.

Commercial acquiescence of competitors: It is my understanding that the willingness of industry to license the patent at issue is an indication of non-obviousness, though consideration must be given to distinguishing respect for the invention from a desire to avoid litigation.

Skepticism: It is my understanding that evidence that those of ordinary skill were skeptical as to the merits of the invention, or even taught away from the invention, are indications of non-obviousness.
- Independent development: It is my understanding that evidence that others developed the claimed invention at about the same time is an indication of obviousness. In contrast, their failure to do so, it follows, would be an indication of non-obviousness.

- Unexpected results: It is my understanding that evidence that those of ordinary skill in the art were surprised by the capabilities of the claimed invention is an indication of non-obviousness.

40. It is my understanding that there must be a nexus between any secondary indicia of non-obviousness and the claimed subject matter.

C. Claim Construction

41. I understand that in proceedings at the Patent Trial and Appeal Board involving unexpired patents—such as the ’360 Patent—claims are construed to have their broadest reasonable interpretation in light of the specification and prosecution history of the patent containing those claims.

42. I understand that the Patent Trial and Appeal Board construes claims in unexpired patents differently from how federal courts construe claims. In particular, I understand that federal courts construe claims according to their ordinary and customary meaning in light of the specification and file history of the patent in which those claims appear.
VI. LEVEL OF ORDINARY SKILL IN THE ART

43. I have been informed by IBM’s attorneys that it is necessary to analyze both a patent’s claims and the prior art from the perspective of a person of ordinary skill in the art at the time of the patent’s invention.

44. I understand that several factors are considered in determining the level of ordinary skill in the art, including the educational level of active workers in the field, the types of problems encountered in the art, the nature of prior art solutions to those problems, prior art patents and publications, the activities of others, the sophistication of the technology involved, and the rapidity of innovations in the field.

45. I have been informed by IBM’s attorneys that the ’360 Patent’s earliest possible priority date is January 30, 2006. Accordingly, my analysis in this case is based on the perspective of a person of ordinary skill in the art as of January 30, 2006.

46. In my opinion, based on my consideration of the above factors in light of my first-hand industry experience, a person of ordinary skill in the art at the time of the invention of the ’360 Patent would have had a bachelor’s degree in computer science or information systems, and at least three to five years’ experience working in the field. That person of ordinary skill in the art would have had experience with internet-based application development and database
administration. That person of ordinary skill in the art would have also been familiar with relevant mobile application technologies at the time, such as the J2ME platform, mobile device programming toolkits, and application programming interfaces for location-based services.

47. I have been informed by IBM’s attorneys that Groupon may attempt to establish that the ’360 Patent has an invention date in October 2005, though Groupon has not yet presented any evidence in this proceeding about that theory. Nonetheless, in my opinion, the level of ordinary skill in the art would be the same in October 2005 at it would be three months later in January 2006. So, my analysis and conclusions would not change.

48. I had sufficient education and experience to qualify as a person of ordinary skill in the art in the 2005-2006 timeframe.

VII. TECHNICAL BACKGROUND

A. Mobile Location-Based Services

49. In the early 2000s, mobile application development was in what could be considered a “missionary stage,” where businesses were beginning to see the value of the technology and were becoming early adopters.³ While I was working in this development sector at the time, there was a proliferation of technologies, including J2ME, device support, LBS, WML, and ‘lite’ versions of technologies

for use on the mobile devices that started to become available, such as kXML, and usable for devices. Toolkits and supported tools helped fuel development of mobile applications.

50. Mobile devices became an attractive development environment for applications, despite their relatively limited hardware. Mobile applications in the early 2000s provided services such as information services (e.g., providing a list of nearby hotels), functional services (e.g., ordering a taxi), location-aware services (e.g., electronic coupon systems such as those described in Jokinen (Ex. 1106) and Callegari (Ex. 1109); advertising systems, and the like), searching services (e.g., obtaining information on transportation), and tracking services (e.g., tracking people and objects).

51. Moreover, it was easy for developers to come up to speed on developing mobile applications. For example, Java developers who were already familiar with J2SE could easily learn J2ME for mobile application development given the similarities between the platforms.

B. Social Networking

52. While social networking services existed as early as the late 1990s, it did not attain the prolific reach that it has today until the early-to-mid 2000s. In the early 2000s, social networks such as Friendster, LinkedIn, MySpace, and Facebook became prominent. Rosenberg and Crowley both describe Friendster
and LinkedIn as examples of social networks in use in the early 2000s. (Ex. 1103, at [0007], corresponding to Ex. 1104, at 3; Ex. 1108, at 15:19-21.)

C. Mobile Social Software

53. Mobile social software combined mobile location-based services with social networking technologies. (Ex. 1108, at Fig. 7.) For the most part, mobile social software systems focused on social interactions of friends and functionality that are available on the mobile platforms. Those systems typically involved a server or other centralized computer system that hosted a website accessible through a typical PC browser. The server also typically communicated with mobile devices that could take advantage of location-based services.

54. For example, Crowley describes the Dodgeball mobile social software. (Ex. 1108, at 2:19-21.) Through Crowley’s website, users register as members, establish a profile, and identify other registered users as friends. (Id. at 2:19-30, 4:65-5:24.) Registered users can “check in” at venues they are attending using their mobile devices and receive notifications of which friends are attending nearby venues on their mobile devices. (Id. at Fig. 7, Fig. 11, 2:18-44.) The ’360 Patent describes the Dodgeball mobile social software as prior art. (’360 Patent at 1:27-29.)

55. As another example, Rosenberg describes a demographic profiling service in which location-based services are employed to determine the
demographics of a particular nightclub or other establishment. (Ex. 1103, at [0003], corresponding to Ex. 1104, at 2.) Similar to Crowley, Rosenberg hosts a website on which users can register themselves to use Rosenberg’s service. (Ex. 1103, at [0059], corresponding to Ex. 1104, at 12.) Rosenberg tracks users via their mobile devices to determine which users having which traits are attending which venues, and to determine a demographic profile of each venue, which profile can then be transmitted to a user’s mobile device. (Ex. 1103, at [0003], corresponding to Ex. 1104, at 2.)

VIII. CLAIM CONSTRUCTION

56. I understand that IBM contends that the following broadest reasonable interpretations apply for certain claim terms. I have applied those broadest reasonable interpretations in my invalidity analysis below.

57. For all of the other claim terms, I have applied the broadest reasonable interpretation of the term in light of the specification and file history of the ’360 Patent in my invalidity analysis below.

A. “or” (Claims 1-3, 7, 8, 11, 12, 14-16, 22, 27, 29, 30, 33, 41, 45, 46, 52)

58. IBM’s attorneys have explained to me that when a claim limitation recites a list of features joined by the term “or,” a prior art reference only has to disclose one of the listed features to read on the claim limitation for anticipation or obviousness purposes.
59. IBM’s attorneys have also explained to me that when there are nested “or” limitations present in a claim (such as branches and sub-branches), the prior art only has to disclose one complete “path” through those nested “or” limitations.

60. Claims 1 and 2 have nested “or” limitations. A summary of those claims’ branches and sub-branches appears below.

61. Accordingly, my invalidity analysis below for Claims 1 and 2 follows a complete path through the branches and sub-branches of Claims 1 and 2.
B. “said system comprising members” (Claims 1, 3, 22, 27)

62. I understand that “said system comprising members” is part of the preamble of Claims 1, 3, 22, and 27. I understand that IBM contends that the broadest reasonable interpretation of “said system comprising members” includes “said system involving members.”

C. “said system/method requiring at least one member to attend a venue” (Claims 1, 2, 3, 22, 27, 52)

63. I understand that “said system/method requiring at least one member to attend a venue” is part of the preamble of Claims 1, 2, 3, 22, 27, and 52. I understand that IBM contends that the broadest reasonable interpretation of “said system/method requiring at least one member to attend a venue” includes “said system/method involving at least one member that attends a venue.”

D. “consisting of (1)” (Claim 23) / “consisting of (2)” (Claim 24)

64. I understand that IBM contends that the broadest reasonable interpretation of “consisting of (1)” includes “wherein said real-time data comprising location information of said member is provided by (1) a position-sensing device.”

65. I understand that IBM contends that the broadest reasonable interpretation of “consisting of (2)” includes “wherein said real-time data comprising location information of said member is provided by (2) said member checking-in using said mobile communication device.”
E. “wherein said indicating does not comprise a request to receive said reward” (Claim 49)

66. I understand that IBM contends that the broadest reasonable interpretation of “wherein said indicating does not comprise a request to receive said reward” encompasses users “checking in” to a venue with their mobile devices. That interpretation is consistent with the file history.

67. In the patent applicants’ amendment dated June 22, 2010, the applicants added new pending Claim 102: “A system according to claim 80, wherein said indicating does not comprise a request to receive said reward.” (Ex. 1102, at 769.) That pending claim is the claim that issued as Claim 49. In that amendment, the applicants described “checking-in” as indicating without requesting to receive a reward:

Claims 102 and 118 find support in FIG. 38 and paragraph 649, lines 6-7, where there is no “request to receive a reward” when “indicating” by checking-in at the Dragon Bar venue.

(Ex. 1102, at 780.)

IX. OVERVIEW OF CROWLEY

68. Crowley describes the Dodgeball social networking service. (Ex. 1108, at 2:19-21.) The ’360 Patent describes the Dodgeball mobile social software in its background. (’360 Patent at 1:27-29.)

69. The goal of Crowley’s invention was to help people use their mobile communication devices to connect with others who are acquaintances or who
otherwise have something in common that makes a social interaction desirable. (Ex. 1108, at 1:54-2:17.) As Crowley explains, “people may be related to others by the system according to interests provided by each user or inferred by the system. As such, a particular evening may be improved for a user, and by meeting additional people, the person's entire social life can be improved. No more sitting alone and lonely.” (Id. at 2:12-17.)

70. Accordingly, Crowley discloses a mobile social networking service. Through Crowley’s website, users register as members, establish a profile, and identify other registered users as friends. (Ex. 1108, at 2:19-30, 4:65-5:24.) Registered users can “check in” or “opt in” at venues they are attending using their mobile devices (e.g., by sending a text message to a computer system running Crowley’s social networking service) and receive notifications of which friends are attending nearby venues on their mobile devices. (Id. at Fig. 7, Fig. 11, 2:18-44.)

71. Crowley’s social networking service can also schedule events for users with similar demographics or interests, which events Crowley calls “square dances.” (Ex. 1108, at 3:27-44, 17:30-48.) Users opt in to a square dance by indicating their presence at a venue and their interest in joining a square dance event, such as by texting “join,” the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system. (Id. at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38, 18:10-14.)
72. Upon receiving opt-ins, “[t]he system may then iteratively identify commonalities among sub-groups of users in a particular area who want to play, and send users with commonalities to a single venue for a period of time. The system may simply send the users to a location and then remain silent, letting the users try to discover what they have in common. Or the system may identify the common characteristic through messages to the users, and then suggest topics of conversation, or otherwise provide suggestions or assistance in making the group’s social interaction better.” (Ex. 1108, at 17:32-47.)

73. Crowley also describes providing electronic coupons to users who check in or opt in from a venue, thereby indicating their presence at the venue:

   For example, venues may be associated with particular concepts or key words, so that when a user opts in from a venue, the system may provide messages associated with the key words or concepts for the venue. For example, where the venue is a bar, the user may be provided information about promotions at the bar or at nearby competing bars, or could also be provided with a promotion for a particular brand of alcohol. The messages may also act like coupons for users. For example, venues may have connections to certain advertisers, and a user may show a bartender, for example, an ad on their telephone, which the bartender may clear using an identification number unique to the
venue, and may thereby register with a system the fact that the venue honored the coupon. As such, the advertiser may then rebate or provide a certain amount of money to the venue. (Ex. 1108, at 20:21-36.)

X. OVERVIEW OF CALLEGARI

74. Callegari describes a merchant presence service that merchants can use to promote their goods and services to nearby customers. (Ex. 1109, at [0002], [0029]-[0030], [0033].) Merchants can register with the service in order to have their presence transmitted to nearby customers in the form of electronic coupons via merchant presence servers. (Id. at [0002], [0030], [0104].) “In one embodiment, merchants subscribe to a service that implements the location-based merchant presence methods described herein.” (Id. at [0104].)

75. Customers also subscribe to Callegari’s merchant presence service in order to receive electronic coupons. (Ex. 1109, at [0030], [0111].) Information regarding those customers can be stored with a merchant presence server. (Id. at [0052].)

76. Restaurants are an example of a merchant described in Callegari, as well as an example of a venue described in the ’360 Patent. (’360 Patent at 5:32-37.) As shown below, annotated Fig. 6A, Fig. 6B, and Fig. 10A depict a Starbucks coffee shop customizing its merchant presence using a website graphical user interface provided by Callegari’s merchant presence service:
<table>
<thead>
<tr>
<th>Figure</th>
<th>Image Depicting Restaurant Using Callegari’s Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 1109, Fig. 6A</td>
<td><img src="image1.png" alt="Image of a restaurant setup for Starbucks" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 6B</td>
<td><img src="image2.png" alt="Category and Keywords" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 10A</td>
<td><img src="image3.png" alt="Coupon Title" /></td>
</tr>
</tbody>
</table>
77. Callegari describes transmitting information to venues and to members. As discussed in the preceding paragraph, Callegari’s service provides a graphic user interface for restaurants to customize their merchant presence. Further, customers also subscribe to the service in order to receive electronic coupons and other information about a merchant’s presence. (Ex. 1109, at [0029]-[0030], [0111].)

78. Callegari describes that its customers have mobile communication devices, such as mobile telephones, mobile computers, personal digital assistants, Blackberries, and the like. (Ex. 1109, at [0047].) Customers use their mobile devices in order to provide their location to a merchant and to receive information about a merchant based on their location. (Id.) For example, the mobile devices can include GPS capabilities or other position-sensing technologies. (Id. at [0038], [0059].) Alternatively, a consumer can make his or her location available by using request mode to enter his or her current location. (Id. at [0037].)

79. Callegari’s merchant presence service involves members that attend venues. Callegari describes that consumers redeem electronic coupons that they receive. (Ex. 1109, at [0107].) A person of ordinary skill in the art would recognize that a user redeeming an electronic coupon provided by a merchant would involve the user going to the merchant’s location, such as going to a Starbucks to obtain a 10% discount on coffee per the electronic coupon title
depicted in Fig. 10A. (Id. at Fig. 10A, [0107].) Callegari also describes that “[r]edemption codes may also be keyed into point of sale system to further track coupon campaigns with respect to identifying the points of sale most often used by the consumer.” (Id.) A person of ordinary skill in the art would recognize that a customer using a point of sale at a restaurant is attending that restaurant.

80. Callegari’s merchant presence service also involves members that attend venues in that Callegari’s service can trigger location-based programs based on the consumer entering a location. For example, Table 1 of Callegari describes an “OnEnter” process that can run an executable program when a user enters a location. (Ex. 1109, at [0082].) Callegari describes that its merchant presence service, which venues such as restaurants can subscribe to as discussed above, can be incorporated into an application that implements such “OnEnter” processes. (Id. at [0063].)

81. Callegari’s merchant presence service can track the demographics of users that receive and redeem coupons over time. (Ex. 1109, at [0053], [0056], [0107].) That demographic data can then be used to target future rounds of coupons. (Id. at [0107].)
XI. OPINIONS ABOUT INVALIDITY OF THE CHALLENGED CLAIMS

A. Claims 1, 2, 22-24, 27, 33-35, 41, 42, 45, 46, 49, and 52 Are Obvious Over Crowley.

82. As I explain in detail below, it is my opinion that Claims 1, 2, 22-24, 27, 33-35, 41, 42, 45, 46, 49, and 52 of the ’360 Patent are obvious over Crowley.

1. Claim 1, Branch (2), Sub-Branch (2)(A)

83. In my opinion, Claim 1 is obvious over Crowley. Crowley renders obvious all of the limitations of Claim 1, Branch (2), Sub-Branch (2)(A). That forms a complete path through Claim 1’s nested “or” limitations, as shown in the below chart, with the selected branches highlighted in green arrows.
i. **Preamble:** A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

84. Crowley discloses a system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue.

85. Crowley describes providing services to venues where people aggregate, such as bars, restaurants, coffee houses, and museums. (Ex. 1108, at 17:63-18:3.) For example, Crowley describes promoting events scheduled by a venue or group of venues by messaging users about those events; promoting those events on a website; sending promotional materials and advertisements to prospective attendees at those events; and scheduling event recap parties at venues. (*Id.* at 17:63-18:7, 19:65-20:9.) Crowley also describes that when user checks into a venue, Crowley’s system can provide promotional material about that venue or other venues. (*Id.* at 20:20-28.)

86. Crowley’s system involves members associated with an organization. More specifically, Crowley describes a social networking system with which users
register as members, establish a profile, and identify other registered users as friends. (Ex. 1108, at 2:19-30, 4:65-5:24.)

87. Crowley’s system processes and transmits information to venues, members, or non-members. In Crowley’s system, a registered user can identify their location by sending a message to the system, whereupon the user’s location is transmitted to the user’s friends registered with the system. (Ex. 1108, at Fig. 3, Fig. 4, 2:19-30.) For example, as shown below in Fig. 4 of Crowley, when user TJ identifies his location as the Luna Lounge, the system sends notifications to users Tony, Don Pablo, and Katie that TJ is at Luna Lounge.
88. Crowley’s system involves members having mobile communication devices. “This system is directed to location-based social software for mobile
devices, such as cellular telephones.” (Ex. 1108, at 2:19-21.) The mobile devices send communications to and receive communications from a computer system that can include a computer server or group of servers. (Id. at 11:49-67.) “Communications between and among these systems may follow standard protocols and guidelines, such as for SMS or MMS text messaging, email, WAP operation, TCP/IP, or UDP, including with applications programmed (e.g., j2ME) to provide alerts while listening for incoming data.” (Id. at 11:62-67.)

89. Crowley’s system involves at least one member attending a venue. Crowley describes that its system can schedule events called “square dances.” (Ex. 1108, at 17:30-48.) To schedule a square dance, Crowley’s system identifies users in a particular area with something in common and instructs those users to attend a venue. (Id. at 17:38-41.) A square dance can involve multiple rounds: once a first round is completed, Crowley’s system can instruct users to attend a different venue for the next round. (Id. at 19:21-29.) Crowley also describes that its users can “opt in” while attending a venue to receive promotional material such as advertising or coupons for the venue. (Id. at 20:17-37.)

ii. a data processor, said data processor:

90. Crowley discloses a data processor.

91. Crowley describes “a computer system 82 such as a computer server or group of servers.” (Ex. 1108, at 11:49-51.) “Computer system 82 functions to
communicate with the outside world, such as through a connection to a public network like the Internet 84. System 82 may also be connected to or through other networks, such as a local area network (LAN). Such a second connection may permit for monitoring, maintenance, and updating of the computer system 82 by an administrator.” (Id. at 11:51-57.) Crowley’s computer system 82 is shown in block diagram form in Fig. 6:

92. Crowley’s computer system includes an interface 86 that can include a web server and/or a mail server. (Ex. 1108, at 12:1-6.) Upon receiving a message
from a user, such as by email, Short Message Service (SMS), or Multimedia Message Service (MMS), the computer system’s parser 96 processes those messages and extracts information from those messages. (Id. at 12:6-22.)

93. The message analyzer 98 uses the extracted information to determine which user sent the message; what city or venue the user is in; whether there are any user commands in the message; and what commands should be performed or what new messages should be sent based on the received message. (Ex. 1108, at 12:23-45, 13:12-25.)

94. The computer system also includes a friend identifier 100 and location engine 102, which can determine which friends of a user are actively participating in Crowley’s social networking system and where those friends are located. (Ex. 1108, at 12:46-65.)

95. The computer system also includes a message generator 104 that “may interface with the other components of computer system 82 to generate messages to be sent out to users of the system 80.” (Ex. 1108, at 14:50-52.)

96. Finally, the computer system “can be provided with a number of appropriate databases,” including databases with users’ profiles; information about users’ relationships with other users; information about venues; and workflow logic and rules for events managed by the computer system. (Ex. 1108, at 14:34-50.)
iii. **Branch (2): comprising information of a reward;**

97. Crowley discloses a data processor comprising information of a reward.

98. Crowley describes that its system can provide advertising messages to users when the users “opt in” from (indicate their presence at) a particular venue. (Ex. 1108, at 20:20-25.)

99. Those advertising messages can include information about a promotion at a bar, or a promotion for a particular brand of alcohol. (Ex. 1108, at 20:25-28.) Promotional material is an example of a reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.)

100. Crowley’s advertising messages can also function as electronic coupons, another form of reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.) As Crowley describes:

> The messages may also act like coupons for users. For example, venues may have connections to certain advertisers, and a user may show a bartender, for example, an ad on their telephone, which the bartender may clear using an identification number unique to the venue, and may thereby register with a system the fact that the venue honored the coupon. As such, the advertiser may then rebate or provide a certain amount of money to the venue. (*Id.* at 20:29-36.)
iv. performing in the following order: prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;

101. Crowley renders obvious a data processor that, prior to a member being in a venue, informs said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue. Crowley also expressly discloses the data processor performing the next three limitations in order after informing a member of said reward that is receivable upon said member indicating in real time said member's presence in said venue, as explained below.

102. Crowley describes scheduling a square dance event at a venue or group of venues, as discussed above in Section XI.A.1.i. Once the event is scheduled, but before the event begins (i.e., before members arrive at the venue for the event), Crowley’s system can promote the event by sending promotional material or advertisements to users to inform users about the event and to encourage users to attend the venue:

For example, the system may send messages notifying users who have used local venues about the event, or may include the event on a schedule of events at the system web site. Appropriately-tailored promotional materials or advertising targeted to the particular users or to the type of event may also be provided to users in messages or at the web site using known mechanisms for delivering
103. Crowley does not expressly describe that the “promotional materials or advertising” sent to its users before a scheduled square dance inform a member, before the member is at the venue, of a reward receivable at a venue. Nonetheless, it would have been obvious to modify Crowley’s “promotional materials or advertising” sent to a user before a square dance to inform a user of a reward that becomes receivable when the user indicates his or her presence at a venue prior to that user attending a venue. Crowley itself suggests such a modification.

104. One problem that Crowley recognized with scheduling a square dance is that there may not be enough people interested in attending to hold an effective event:

At some time before the event starts (or even during the event), the system may receive opt ins from users. The opt in messages, as shown above, may include for example, a “join” command, an “@” command, and a location for the user (such as a venue name). As opt ins arrive, the system may keep track of the number of active users in a particular area. As the time for the event approaches, the system may analyze the number of users in an area, and if the number is too low for an effective event, may cancel the event by sending cancellation messages to all active users in the area, may simply
instruct the active users to go to a particular venue or venues if they want to meet other active users, or may instruct the users to move to another area in which it has been determined that there are enough active users to hold an effective event. (Ex. 1108, at 18-10:23.)

105. To solve the problem of not having enough people at a venue to hold an effective square dance event, Crowley proposes providing rewards to users that attend a venue hosting a square dance: “Venues may organize to provide a prize to any groups that can solve their problem in a particular time period for example, free refreshments. The possibility of such prizes could entice more users to participate in the event, and to make participants more active in their socializing.” (Ex. 1108, at 19:2-6.) A person of ordinary skill in the art would have recognized that using a reward to entice users to attend a venue requires informing users about the reward first. Common sense dictates that a user cannot be enticed by a reward unless he or she knows about the existence of the reward.

106. Crowley also expressly discloses a reward that is receivable upon a member indicating his or her presence in real-time at a venue.

107. Crowley describes that its system can provide advertising messages to users when the users “opt in” from (indicate their presence at) a particular venue. (Ex. 1108, at 20:20-25.) A user opts into a venue by texting the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer
Those advertising messages can include information about a promotion at a bar, or a promotion for a particular brand of alcohol. (Ex. 1108, at 20:25-28.) Promotional material is an example of a reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.)

109. Crowley’s advertising messages can also function as electronic coupons, another form of reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.) As Crowley describes:
The messages may also act like coupons for users. For example, venues may have connections to certain advertisers, and a user may show a bartender, for example, an ad on their telephone, which the bartender may clear using an identification number unique to the venue, and may thereby register with a system the fact that the venue honored the coupon. As such, the advertiser may then rebate or provide a certain amount of money to the venue. (Id. at 20:29-36.)

110. A person of ordinary skill in the art would have found it obvious to use Crowley’s “promotional materials or advertising” (Ex. 1108, at 17:67-18:6) sent to users before a square dance (i.e., before users are at a venue hosting a square dance) to inform users of a reward that is receivable when the user opts in from a venue hosting the square dance, such as an electronic coupon or promotional material about the venue. (Id. at 20:20-36.)

111. Informing users about a reward that they can receive by attending a venue would entice users to attend that venue, as Crowley suggests. (Ex. 1108, at 19:4-6.) A person of ordinary skill in the art would have been motivated to use Crowley’s pre-square dance “promotional materials or advertising” to inform users of a reward that is receivable when the user “opts in” from a venue hosting a square dance to entice users to attend the square dance. Enticing users to attend a square dance is beneficial in that it improves the likelihood that there will be
enough people at the venue for the square dance to be an effective, enjoyable event. (Id. at 18:15-23.) In other words, informing users through pre-square dance “promotional materials or advertising” of a reward that the user can receive by opting into a venue hosting a square dance improves the likelihood that the square dance will be a success.

112. Moreover, modifying Crowley’s pre-square dance “promotional materials or advertising” to inform a user about a reward that is receivable when the user opts into a venue would require nothing more than modifying the content of the promotional materials or advertising. Modifying the content of promotional materials or advertising delivered via SMS, MMS, or on a web site would have been well within the skill set of a person of ordinary skill in the art. The most complicated modification would require nothing more than updating the system’s website using known HTML techniques. The simplest modification would require nothing more than changing the content of a text message sent by the system to Crowley’s users to advertise the square dance.

v. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

113. Crowley discloses a data processor receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable.
114. Crowley describes that its system can provide advertising messages to users when the users “opt in” from (indicate their presence at) a particular venue. (Ex. 1108, at 20:20-25.) A user opts into a venue by texting the symbol “@” and the name of the venue the user is attending to Crowley’s computer system. (Id. at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.)

115. Those advertising messages can include information about a promotion at a bar, or a promotion for a particular brand of alcohol. (Ex. 1108, at 20:25-28.) Promotional material is an example of a reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.)

116. Crowley’s advertising messages can also function as electronic coupons, another form of reward described in the ’360 Patent. (’360 Patent at Claims 14 and 46.) As Crowley describes:

   The messages may also act like coupons for users. For example, venues may have connections to certain advertisers, and a user may show a bartender, for example, an ad on their telephone, which the bartender may clear using an identification number unique to the venue, and may thereby register with a system the fact that the venue honored the coupon. As such, the advertiser may then rebate or provide a certain amount of money to the venue. (Id. at 20:29-36.)
vi. **Sub-Branch (2)(A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and**

117. Crowley discloses a data processor processing said indicating to provide processed data comprising (A) the real-time location of said member.

118. As discussed above, a user opts into (indicates his or her presence at) a venue by texting the symbol “@” and the name of the venue the user is attending to Crowley’s computer system. (Ex. 1108, at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.)

119. Upon receiving an opt-in message from the user, Crowley’s computer system processes the opt-in message to determine which venue the user is currently attending. (Ex. 1108, at Fig. 5, 5:52-64, 10:53-11:2, 13:12-25.) That processing also includes determining the location of the venue that the user is currently attending, *i.e.* the user’s real-time location:

Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues
for which the location is known (and may also check common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)

vii. communicating to a recipient said processed data.

120. Crowley discloses a data processor communicating to a recipient said processed data.

121. As discussed above, Crowley’s computer system determines the real-time location of a user based on receiving an “opt in” message from the user that includes the “@” command and the name of the venue that the user is currently attending. (Ex. 1108, at 5:52-64, 10:53-11:2, 13:12-25.)

122. After determining the user’s location from the “opt in” message, the computer system then sends a message to the user’s acquaintances informing them
of the user’s location. (Ex. 1108, at Fig. 3, Fig. 4, Fig. 5, 7:12-31, 9:20-43, 11:3-16.) In the example shown below in Fig. 4, the user TJ indicates that he is currently attending the venue Luna Lounge by sending an “@Luna Lounge” message to the system. After processing TJ’s message, the system then messages users Tony, Don Pablo, and Katie to tell them that TJ is at Luna Lounge.

**FIGURE 4**

(Ex. 1108, at Fig. 4 (annotations added), *see also id.* at 9:20-43.)
123. Fig. 11 also indicates that when users send an “@” command from a venue, Crowley’s system broadcasts the user’s location to the user’s friends:

(Ex. 1108, at Fig. 11 (annotations added).)

2. **Claim 2, Branch (2), Sub-Branch (2)(A)**

124. Claim 1 and Claim 2 and are identical from a technical standpoint. The only difference is that Claim 1 is a system claim comprising a data processor that performs certain steps and Claim 2 is a method claim employing a data processor that performs those same steps. That difference is not material. Claim 2 is obvious over Crowley for the same reasons as Claim 1, following the same path through Claim 2’s branches as through Claim 1’s branches.
Preamble: A method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor

125. As I explained above, the only difference between Claim 1 and Claim 2 is that Claim 1 is a system claim comprising a data processor that performs certain steps and Claim 2 is a method claim employing a data processor that performs the same steps. That difference would not be material to a person of
ordinary skill in the art. The portions of Crowley I cited for the preamble of Claim 1 in Sections XI.A.1.i and XI.A.1.ii disclose a method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor.

ii. Branch (2): comprising information of a reward;

126. This limitation is the same as the “comprising information of a reward” limitation of Claim 1. For the reasons I explained above in Section XI.A.1.iii, Crowley discloses a data processor comprising information of a reward.

iii. performing in the following order: prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;

127. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.iv, Crowley renders obvious a data processor prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue. Crowley also discloses performing the next three limitations in order after this limitation.
iv. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

128. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.v, Crowley discloses a data processor receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable.

v. Sub-Branch (2)(A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and

129. This limitation is the same limitation that appears in Claim 1, Sub-Branch (2)(A). For the reasons I explained above in Section XI.A.1.vi, Crowley discloses a data processor processing said indicating to provide processed data comprising (A) the real-time location of said member.

vi. communicating to a recipient said processed data.

130. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.vii, Crowley discloses a data processor communicating to a recipient said processed data.
3. Claim 22

131. In my opinion, Claim 22 is obvious over Crowley.

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

132. This preamble is the same as the preamble of Claim 1. For the reasons I explained above in Section XI.A.1.i, Crowley discloses a system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue.

ii. a data processor, said data processor:

133. This limitation is the same as the data processor limitation of Claim 1. For the reasons I explained above in Section XI.A.1.ii, Crowley discloses a data processor.
receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue,

134. Crowley discloses a data processor receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue.

135. Crowley explains that registered users’ mobile communication devices can include a GPS feature which can automatically determine the users’ locations and provide them to Crowley’s computer system. (Ex. 1108, at 9:66-10:1, 10:6-7.) Each user’s GPS location can then be compared against a list of venues with known locations to determine which venue each user is attending. (Id. at 10:61-64, 14:42-44.)

136. Crowley also explains that multiple registered users at the same venue can provide their location information via opt-ins. “For example, users may send a message like: “join@Luna Lounge,” which will indicate they want to join the event, and also indicate the general area in which they are located.” (Ex. 1108, at 17:35-38.) The “@Luna Lounge” portion of that command indicates that the users are presently at the Luna Lounge. (Id. at 14:28-32.)

137. Upon receiving an opt-in message from the user, Crowley’s computer system processes the opt-in message to determine which venue each user is currently attending. (Ex. 1108, at Fig. 5, 5:52-64, 10:53-11:2, 13:12-25.)
processing also includes determining the location of the venue that each user is currently attending, *i.e.* the user’s real-time location:

Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues for which the location is known (and may also check common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)
iv. said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device;

138. Crowley discloses said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device.

139. I understand that Crowley does not need to disclose both alternatives to meet this claim limitation, but nevertheless, Crowley discloses both alternatives, and I discuss both alternatives below.

140. First, Crowley discloses said real-time data comprising location information of said member provided by (1) a position-sensing device. Crowley explains that a user’s mobile communication device can include a GPS feature which can automatically determine the user’s location and provide it to Crowley’s computer system. (Ex. 1108, at 9:66-10:1, 10:6-7.)

141. Second, Crowley discloses said real-time data comprising location information of said member provided by (2) checking-in using said mobile communication device. In Crowley, a user opts into (indicates his or her presence at) a venue by texting the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system. (Ex. 1108, at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.) An example is shown in Fig. 11, where a user uses a flip phone to text his or her location to the computer server:
142. Upon receiving opt-in messages from users, Crowley’s computer system processes the opt-in message to determine which venue each user is currently attending. (Ex. 1108, at Fig. 5, 5:52-64, 10:53-11:2, 13:12-25.) That processing also includes determining the location of the venue that each user is currently attending, i.e. the user’s real-time location:

Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues for which the location is known (and may also check
common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)

v. correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue; and

143. Crowley renders obvious a data processor correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue.

144. As discussed above, Crowley’s social networking service can schedule events for users with similar demographics or interests, which events Crowley calls “square dances.” (Ex. 1108, at 3:27-44, 17:30-48.) Users opt in to a square dance by indicating their presence at a venue and their interest in joining a
square dance event, such as by texting “join,” the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system.  (*Id.* at Fig. 11, 3:28-35, 5:52-64, 13:18-25, 14:27-32, 17:35-38, 18:10-14.)

145. After receiving indications that users are present at various venues, Crowley’s system groups those users based on their current locations.  (Ex. 1108, at 3:28-35, 18:24-32.)

146. Then, Crowley’s system breaks each group down into sub-groups based on a common trait of the users identified in the users’ profiles, which can include demographic traits such as political viewpoints or where the users grew up.  (Ex. 1108, at 3:28-35, 15:54-57, 17:49-52, 18:38-39, 19:13-16.)

147. After selecting users to form a sub-group based on a demographic trait or other commonality, Crowley’s system then instructs users in that sub-group to attend a particular venue that will host the square dance event.  (Ex. 1108, at 3:28-37, 17:38-41, 18:55-58.)

148. To the extent Crowley does not expressly disclose scheduling a square dance event at a venue that users are already attending, it would have been obvious to modify Crowley to do so, *i.e.*, by grouping users by venue, breaking a group of users at a venue into sub-groups, and inviting a sub-group of users at the venue to socialize with one another at the venue, such as at a specially marked off area at the venue.  (Ex. 1108, at 3:28-39, 18:61-62.)
149. So modified, Crowley would work as follows. Crowley would receive opt-ins from users at various venues, as Crowley discloses. (Ex. 1108, at Fig. 11, 3:28-35, 5:52-64, 13:18-25, 14:27-32, 17:35-38, 18:10-14.) Crowley would then group users by their geographic areas, namely, the venues they are currently attending. (Id. at 18:24-32.) Crowley specifically teaches using small geographic areas to define groups so that users do not have to travel far to attend a square dance. (Id. at 18:29-32.) Crowley’s system would then break users at a particular venue into sub-groups based on their profile information (id. at 15:54-57, 17:38-41, 17:49-52, 18:55-58), direct the users in a sub-group to go to a specific part of the venue marked off for the square dance (id. at 17:38-41, 18:61-62), and identify the sub-group commonality to the users once the square dance at the venue begins to facilitate socialization. (Id. at 17:43-48.) That process—breaking users down into groups based on which venue they are attending (i.e., their location) and into sub-groups based on their profile information (i.e., their traits)—entails correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue. The above process makes use of the existing algorithm described by Crowley for a use case in which the venue hosting the square dance is the same venue from which users are sending opt-ins to Crowley’s system.
150. Modifying Crowley to schedule square dances at venues that users are already attending provides at least two benefits that would have motivated a person of ordinary skill in the art to make that modification.

151. First, that modification would have been convenient for users seeking to attend a square dance. Users would not have to travel from venue to venue to meet other users with similar demographic traits or similar interests. Instead, Crowley’s system could identify common traits or interests among users already at a venue, and encourage users with those traits to socialize with one another, all without having to leave the venue. (Ex. 1108, at 17:43-48, 18:61-62.) “This increased social interaction can lead to many positive things that occur when there is more direct interaction with others.” (Id. at 4:62-64.)

152. Second, Crowley recognized that a certain number of users are necessary for a square dance event—if there are not enough users, the event may not be effective or enjoyable. (Ex. 1108, at 18:15-23, 19:48-51.) Scheduling square dances at a venue where a sufficient number of users are already located—in other words, “going to the users”—would increase the likelihood of there being enough users with a particular common trait or interest to have an effective square dance. Crowley’s system would know which users and how many users are attending each venue based on users providing their locations to Crowley’s system, as described above in Sections XI.A.3.iii and XI.A.3.iv.
vi. communicating to a recipient said demographic of attendees at said venue.

153. Crowley discloses a data processor communicating to a recipient said demographic of attendees at said venue.

154. As discussed above in Section XI.A.3.v, Crowley renders obvious scheduling a square dance by identifying users at a venue with a common trait and instructing those users to socialize with one another, such as by instructing those users to go to a specially-marked off area at the venue. (Ex. 1108, at 3:28-39, 18:61-62.)

155. During a square dance, “the system may identify the common characteristic through messages to the users, and then suggest topics of conversation, or otherwise provide suggestions or assistance in making the group's social interaction better. In this manner, the system may act as an active catalyst for group social interaction.” (Ex. 1108, at 17:43-48.)

156. Crowley describes that the common characteristics of users attending a venue can include their political viewpoints and where the users grew up. (Ex. 1108, at 18:38-39, 19:13-16.) The ’360 Patent identifies political affiliation and home ZIP codes as examples of traits that can be included in a demographic of attendees at a venue. (’360 Patent at 11:24-43.)

157. Thus, Crowley describes sending to users attending a venue hosting a square dance messages describing the users’ common political viewpoint or
common location where the users grew up. In that respect, Crowley describes transmitting a demographic of attendees at the venue hosting the square dance to the users participating in the square dance.

4. Claim 23

158. In my opinion, Claim 23 is obvious over Crowley.

   i. A system according to claim 22

159. Crowley renders obvious a system according to Claim 22, as explained above in Section XI.A.3.

   ii. consisting of (1).

160. As explained above, I understand that IBM contends that the broadest reasonable interpretation of “consisting of (1)” includes “wherein said real-time data comprising location information of said member is provided by (1) a position-sensing device.”

161. Crowley discloses wherein said real-time data comprising location information of said member is provided by (1) a position-sensing device. Crowley explains that a user’s mobile communication device can include a GPS feature which can automatically determine the user’s location and provide it to Crowley’s computer system. (Ex. 1108, at 9:66-10:1, 10:6-7.) The GPS coordinates of the user can then be used by Crowley’s computer system to determine which venue the
user is attending, such as by using a lookup table that maps GPS coordinates to particular venues. (*Id.* at 10:61-64.)

5. **Claim 24**

162. In my opinion, Claim 24 is obvious over Crowley.

   i. **A system according to claim 22**

163. Crowley renders obvious a system according to Claim 22, as explained above in **Section XI.A.3.**

   ii. **consisting of (2).**

164. As explained above, I understand that IBM contends that the broadest reasonable interpretation of “consisting of (2)” includes “wherein said real-time data comprising location information of said member is provided by (2) said member checking-in using said mobile communication device.”

165. In Crowley, a user opts into (indicates his or her presence at) a venue by texting the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system. (Ex. 1108, at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.) An example is shown in Fig. 11, where a user uses a flip phone to text his or her location to the computer server, and which Crowley explicitly identifies as a check-in:
Upon receiving an opt-in message from the user, Crowley’s computer system processes the opt-in message to determine which venue the user is currently attending. That processing also includes determining the location of the venue that the user is currently attending, i.e. the user’s real-time location:

Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues for which the location is known (and may also check
common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)

6. Claim 27, Branch (A)

167. Claim 27, Branch (A) is identical to Claim 1, Branch (2), Sub-Branch (2)(A). Claim 27 is obvious over Crowley for the same reasons as Claim 1.

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

168. This preamble is the same as the preamble of Claim 1. For the reasons I explained above in Section XI.A.1.i, Crowley discloses a system for
providing a service to venues where people aggregate, said system comprising
members associated with an organization for processing and transmitting
information to said venues, said members or non-members, said members having
mobile communication devices, said system requiring at least one member to
attend a venue.

ii. a data processor, said data processor:

169. This limitation is the same as the data processor limitation of Claim 1.

For the reasons I explained above in Section XI.A.1.ii, Crowley discloses a data
processor.

iii. comprising information of a reward;

170. This limitation is the same as the “comprising information of a
reward” limitation of Claim 1. For the reasons I explained above in Section
XI.A.1.iii, Crowley discloses a data processor comprising information of a reward.

iv. performing in the following order: prior to a member
being in a venue, informing said member of said
reward that is receivable upon said member
indicating in real time said member's presence in said
venue;

171. This limitation is the same limitation that appears in Claim 1. For the
reasons I explained above in Section XI.A.1.iv, Crowley renders obvious a data
processor prior to a member being in a venue, informing said member of said
reward that is receivable upon said member indicating in real time said member's
presence in said venue. Crowley also discloses performing the next three limitations in order after this limitation.

v. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

172. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.v, Crowley discloses a data processor receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable.

vi. Branch (A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and

173. This limitation is the same limitation that appears in Claim 1, Sub-Branch (2)(A). For the reasons I explained above in Section XI.A.1.vi, Crowley discloses a data processor processing said indicating to provide processed data comprising (A) the real-time location of said member.
vii. communicating to a recipient said processed data.

174. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.vii, Crowley discloses a data processor communicating to a recipient said processed data.

7. Claim 33

175. In my opinion, Claim 33 is obvious over Crowley.

i. A system according to Claim 27,

176. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.

ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

177. Crowley discloses wherein said data processor comprises a computer server.

178. As discussed above in Section XI.A.1.ii, Crowley describes “a computer system 82 such as a computer server or group of servers.” (Ex. 1108, at 11:49-51.) The computer system 82 is the data processor described above.

8. Claim 34

179. In my opinion, Claim 34 is obvious over Crowley.

i. A system according to Claim 27,

180. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.
wherein said data processor transmits to said mobile communication device that said reward is receivable.

181. Crowley discloses wherein said data processor transmits to said mobile communication device that said reward is receivable.

182. Crowley describes transmitting promotional or advertising messages from the system to users’ mobile devices. (Ex. 1108, at 20:10-25.) Crowley also describes transmitting those messages from the system to a user’s mobile device when a user opts in from a venue. (Id. at 20:25-34.)

183. An example promotional or advertising message transmitted by the system to a user’s mobile device is an electronic coupon, which is a reward. Ex. 1108, at 20:21-34.) As Crowley explains,

    The messages may also act like coupons for users. For example, venues may have connections to certain advertisers, and a user may show a bartender, for example, an ad on their telephone, which the bartender may clear using an identification number unique to the venue, and may thereby register with a system the fact that the venue honored the coupon. (Ex. 1108, at 20:29-34.)

9. Claim 35

184. In my opinion, Claim 35 is obvious over Crowley.

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All emphases in this declaration are added except where I indicate otherwise.
i. A system according to claim 27,

185. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.

ii. wherein said indicating comprises a checkin.

186. Crowley discloses wherein said indicating comprises a checkin.

187. In Crowley, a user opts into (indicates his or her presence at) a venue by texting the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system. (Ex. 1108, at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.) An example is shown in Fig. 11, where a user uses a flip phone to text his or her location to the computer server, and which Crowley explicitly identifies as a check-in:
188. Upon receiving an opt-in message from the user, Crowley’s computer system processes the opt-in message to determine which venue the user is currently attending. (Ex. 1108, at Fig. 5, 5:52-64, 10:53-11:2, 13:12-25.) That processing also includes determining the location of the venue that the user is currently attending, i.e. the user’s real-time location:

Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues for which the location is known (and may also check
common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)

10. Claim 41

189. In my opinion, Claim 41 is obvious over Crowley.

i. A system according to Claim 27,

190. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.

ii. wherein said reward is provided by said venue or a sponsor, said reward receivable at said venue.

191. Crowley discloses wherein said reward is provided by said venue or a sponsor, said reward receivable at said venue.
192. Crowley describes transmitting promotional or advertising messages from the system to users’ mobile devices. (Ex. 1108, at 20:10-25.) Crowley also describes transmitting those messages from the system to a user’s mobile device when a user opts in from a venue. (Id. at 20:25-34.)

193. An example promotional or advertising message transmitted by the system to a user’s mobile device is an electronic coupon, which is a reward the user receives for indicating his or presence at the venue by opting in. (Ex. 1108, at 20:21-34.) The electronic coupon can be provided by an advertiser that provides a rebate or certain amount of money to the venue for honoring the coupon. (Id. at 20:29-36.) By providing compensation to the venue for honoring the coupon, the advertiser providing the coupon is acting as a sponsor.

11. Claim 42

194. In my opinion, Claim 42 is obvious over Crowley.

i. A system according to Claim 27,

195. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.

ii. wherein said reward is provided by said organization.

196. Crowley discloses wherein said reward is provided by said organization.
197. Crowley describes transmitting promotional or advertising messages from the system to users’ mobile devices. (Ex. 1108, at 20:10-25.) An example promotional or advertising message transmitted by the system to a user’s mobile device is an electronic coupon, which is a reward the user receives from the system for indicating his or presence at the venue by opting in. (Ex. 1108, at 20:21-34.) The system provides the electronic coupon to the user by transmitting it to the user’s mobile device. (Id.)

12. Claim 45

198. In my opinion, Claim 45 is obvious over Crowley.

i. A system according to Claim 27,

199. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.

ii. wherein said informing is for: (a) providing trait information, (b) providing behavior information, (c) providing location information, (d) providing a demographic of attendees, (e) providing characteristic information, (f) accepting a venue's promotion, (g) accepting a sponsor's promotion, (h) recruiting new members or (i) having become a member of said organization.

200. Crowley renders obvious wherein said informing is for: (a) providing trait information, (b) providing behavior information, (c) providing location information, (d) providing a demographic of attendees, (e) providing characteristic information, (f) accepting a venue's promotion, (g) accepting a sponsor's
promotion, (h) recruiting new members or (i) having become a member of said organization. More specifically, Crowley renders obvious wherein said informing is for (c) providing location information.

201. When a user opts in from a venue, Crowley’s system sends promotional material to the user’s mobile communication device. (Ex. 1108, at 20:21-28.) “For example, where the venue is a bar, the user may be provided information about promotions at the bar or at nearby competing bars, or could also be provided with a promotion for a particular brand of alcohol.” (Id. at 20:25-28.) Or, when a user opts in from a venue, Crowley’s system sends a message that acts as an electronic coupon to the user’s mobile communication device. (Ex. 1108, at 20:21-25, 20:29-37.) As I also discussed above in Section XI.A.iv, Crowley renders obvious informing users, before they arrive at a venue, that they can receive an electronic coupon for indicating their presence at a venue.

202. The user opting in from a venue is providing their location information to Crowley’s system. Upon receiving an opt-in message from the user, Crowley’s computer system processes the opt-in message to determine which venue the user is currently attending. (Ex. 1108, at Fig. 5, 5:52-64, 10:53-11:2, 13:12-25.) That processing also includes determining the location of the venue that the user is currently attending, i.e. the user’s real-time location:
Where the message is an “@” message, the system may check [sic] to see if the location information (such as a location proxy in the form of a venue name) is present in the system (step 64). This may involve, for example, comparing a received venue name against a list of venues for which the location is known (and may also check common misspellings of the venue name). If the venue is unknown, an error message may be sent by the server (box 66) and displayed by the client device (box 68). The server may also resolve the location 70, such as by retrieving geographic coordinates for a location from a look-up table having venue names and corresponding geographic coordinate locations, such as GPS coordinates. The distance between two locations may then be computed by known methods. Also, particular venues may have their separation distance determined beforehand, and such a distance may be used. Thus, location and distance may be determined both explicitly and implicitly, or by any appropriate approach. (Ex. 1108, at 10:53-11:2.)

13. Claim 46

203. In my opinion, Claim 46 is obvious over Crowley.

   i. A system according to Claim 27,

204. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.
ii. wherein said reward comprises promotional material, rewards points, a game, cash, credit, a coupon, a discount or organization honors.

205. Crowley discloses wherein said reward comprises promotional material, rewards points, a game, cash, credit, a coupon, a discount or organization honors. More specifically, Crowley discloses rewards in the form of promotional material and coupons.

206. When a user opts in from a venue, Crowley’s system sends promotional material to the user’s mobile communication device. (Ex. 1108, at 20:21-28.) “For example, where the venue is a bar, the user may be provided information about promotions at the bar or at nearby competing bars, or could also be provided with a promotion for a particular brand of alcohol.” (Id. at 20:25-28.) Or, when a user opts in from a venue, Crowley’s system sends a message that acts as an electronic coupon to the user’s mobile communication device. (Ex. 1108, at 20:21-25, 20:29-37.)

14. Claim 49

207. In my opinion, Claim 49 is obvious over Crowley.

i. A system according to Claim 27,

208. Crowley renders obvious a system according to Claim 27, as explained above in Section XI.A.6.
ii. wherein said indicating does not comprise a request to receive said reward.

209. Crowley discloses wherein said indicating does not comprise a request to receive said reward.

210. An indicating that includes a check-in meets the limitation “wherein said indicating does not comprise a request to receive said reward,” as I discussed above in Section VIII.E. Crowley discloses checking into a venue.

211. In Crowley, a user opts into (indicates his or her presence at) a venue by texting the symbol “@” and the name of the venue the user is currently attending to Crowley’s computer system. (Ex. 1108, at Fig. 11, 5:52-64, 13:18-25, 14:27-32, 17:35-38.) An example is shown in Fig. 11, where a user uses a flip phone to text his or her location to the computer server, and which Crowley explicitly identifies as a check-in:
212. When a user opts in from a venue, Crowley’s system sends promotional material to the user’s mobile communication device. (Ex. 1108, at 20:21-28.) “For example, where the venue is a bar, the user may be provided information about promotions at the bar or at nearby competing bars, or could also be provided with a promotion for a particular brand of alcohol.” (Id. at 20:25-28.) Or, when a user opts in from a venue, Crowley’s system sends a message that acts as an electronic coupon to the user’s mobile communication device. (Ex. 1108, at 20:21-25, 20:29-37.)
15. Claim 52, Branch (A)

213. Claim 52, Branch (A) is nearly identical to Claim 2, Branch (2), Sub-Branch (2)(A)—which is in turn nearly identical to Claim 1, Branch (2), Sub-Branch (2)(A). Claim 52 is obvious over Crowley for the same reasons as Claim 1.

i. Preamble: A method for providing a service to venues where people aggregate, said method employing members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor comprising information of a reward, said data processor performing in the following order:

214. Crowley discloses a method for providing a service to venues where people aggregate, said method employing members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor comprising information of a reward, said data processor performing in the following order.

215. For ease of understanding, I have broken the preamble down into three parts, which I discuss below in order.

216. *First*, Crowley discloses a method for providing a service to venues where people aggregate, said method employing members associated with an
organization for processing and transmitting information to said venues, said
members or non-members, said members having mobile communication devices,
said method requiring at least one member to attend a venue, said method
employing a data processor.

217. The first portion of Crowley’s preamble is substantially identical to
the preamble of Claim 1. There are only two differences.

218. The first difference is that Claim 1 is a system claim comprising a
data processor that performs certain steps and Claim 52 is a method claim
employing a data processor that performs the same steps. That difference would
not be material to a person of ordinary skill in the art.

219. The second difference is that Claim 1’s preamble recites “said system
comprising members associated with an organization”, while Claim 52’s preamble
recites “said method employing members associated with an organization.” The
language in both claims refers to involving members associated with an
organization, so that difference also would not be material to a person of ordinary
skill in the art.

220. Accordingly, the disclosure I identified above in Section XI.A.1.i and
Section XI.A.1.ii also discloses a method for providing a service to venues where
people aggregate, said method employing members associated with an
organization for processing and transmitting information to said venues, said
members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor

221. Second, Crowley discloses that the data processor comprises information of a reward, as I described above in Section XI.A.1.iii.

222. Third, Crowley discloses or renders obvious performing the four following limitations in order, as I discussed above in Sections XI.A.1.iv through XI.A.1.vii.

ii. prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;

223. This limitation is almost identical to the “prior to a member…” limitation in Claim 1, except that the “performing in the following order” language has been moved to the preamble in Claim 52.

224. For the reasons I explained above in Section XI.A.1.iv, Crowley renders obvious a data processor prior to a member being in a venue that informs said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue. Crowley also discloses performing the next three limitations in order after this limitation.
iii. receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

225. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.v, Crowley discloses a data processor receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable.

iv. Branch (A): processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and

226. This limitation is the same limitation that appears in Claim 1, Sub-Branch (2)(A). For the reasons I explained above in Section XI.A.1.vi, Crowley discloses a data processor processing said indicating to provide processed data comprising (A) the real-time location of said member.

v. communicating to a recipient said processed data.

227. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.A.1.vii, Crowley discloses a data processor communicating to a recipient said processed data.
B. Claims 1-3, 7, 8, 11-16, and 22-24 Are Obvious Over Callegari.

228. As I explain in detail below, it is my opinion that Claims 1-3, 7, 8, 11-16, and 22-24 are obvious over Callegari.

1. Claim 1, Branch (1), Sub-Branch (1)(A)

229. In my opinion, Claim 1 is obvious over Callegari. Callegari renders obvious all of the limitations of Claim 1, Branch (1), Sub-Branch (1)(A). That forms a complete path through Claim 1’s nested “or” limitations, as shown in the below chart, with the selected branches highlighted in green arrows.
Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

230. Callegari discloses a system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue.

231. Callegari describes a merchant presence service that merchants can use to promote their goods and services to nearby customers. (Ex. 1109, at [0002], [0029]-[0030], [0033].) Merchants can register with the service in order to have their presence transmitted to nearby customers in the form of electronic coupons via merchant presence servers. (Id. at [0002], [0030], [0104].) “In one embodiment, merchants subscribe to a service that implements the location-based merchant presence methods described herein.” (Id. at [0104].)

232. Customers also subscribe to Callegari’s merchant presence service in order to receive electronic coupons. (Ex. 1109, at [0030], [0111].) Information regarding those customers can be stored with a merchant presence server. (Id. at [0052].)
233. Restaurants are an example of a merchant described in Callegari, as well as an example of a venue described in the ’360 Patent. (’360 Patent at 5:32-37.) As shown below, annotated Fig. 6A, Fig. 6B, and Fig. 10A depict a Starbucks coffee shop customizing its merchant presence using a website graphical user interface provided by Callegari’s merchant presence service:

<table>
<thead>
<tr>
<th>Figure</th>
<th>Image Depicting Restaurant Using Callegari’s Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 1109, Fig. 6A</td>
<td><img src="Image" alt="Merchants Setup for starbucks" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 6B</td>
<td><img src="Image" alt="Category and Keywords" /></td>
</tr>
</tbody>
</table>
Callegari describes transmitting information to venues and to members. As discussed in the preceding paragraph, Callegari’s service provides a graphic user interface for restaurants to customize and manage their merchant presence. Further, customers also subscribe to the service in order to receive electronic coupons and other information about a merchant’s presence. (Ex. 1109, at [0029]-[0030], [0111].)

Callegari describes that its customers have mobile communication devices, such as mobile telephones, mobile computers, personal digital assistants, Blackberries, and the like. (Ex. 1109, at [0047].) Customers use their mobile devices in order to provide their location to a merchant and to receive information about a merchant based on their location. (Id.) For example, the mobile devices can include GPS capabilities or other position-sensing technologies. (Id. at [0038], [0059].) Alternatively, a consumer can make his or her location available by using request mode to enter his or her current location. (Id. at [0037].)
236. Callegari’s merchant presence service involves members that attend venues. Callegari describes that consumers redeem electronic coupons that they receive. (Ex. 1109, at [0107].) A person of ordinary skill in the art would have recognized that a user redeeming an electronic coupon provided by a merchant would involve the user going to the merchant’s location, such as going to a Starbucks to obtain a 10% discount on coffee per the electronic coupon title depicted in Fig. 10A. (Id. at Fig. 10A, [0107].) Callegari also describes that “[r]edemption codes may also be keyed into point of sale system to further track coupon campaigns with respect to identifying the points of sale most often used by the consumer.” (Id.) A person of ordinary skill in the art would have recognized that a customer using a point of sale at a restaurant is attending that restaurant.

237. Callegari’s merchant presence service also involves members that attend venues in that Callegari’s service can trigger location-based programs based on the consumer entering a location. For example, Table 1 of Callegari describes an “OnEnter” process that can run an executable program when a user enters a location. (Ex. 1109, at [0082].) Callegari describes that its merchant presence service, which venues such as restaurants can subscribe to as discussed above, can be incorporated into an application that implements such “OnEnter” processes. (Id. at [0063].)
ii. a data processor, said data processor:

238. Callegari discloses a data processor.

239. Callegari describes a presence server 30 that can include a web server 62 and a database 67. (Ex. 1109, at Fig. 5B, [0021], [0056].) A block diagram of the presence server in Callegari’s expanded system 60 is shown below:

![Block diagram of the presence server in Callegari’s expanded system 60.](attachment:image.png)

(Ex. 1109, at Fig. 5B.)

240. The presence server 30 can include databases as shown in Fig. 5B:

The expanded system 60 typically includes various databases 69 to keep information regarding the plurality of merchants consumers. In one embodiment, the database 69 is implemented using Oracle, but any suitable database technology can be used, such as Microsoft SQL server. The database 69 and respective application software may be used to create systems for storing the “location” and “content” merchant information. In addition these databases 69 may provide...
subscriber subsystems, billing subsystems, or administration subsystems to assist in commercial deployment of the system 60 to serve a variety of users and markets. (Ex. 1109, at [0058].)\(^5\)

iii. Branch (1): receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and

241. Callegari renders obvious a data processor receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue.

242. Callegari describes that its subscribers have mobile communication devices, such as mobile telephones, mobile computers, personal digital assistants, Blackberries, and the like. (Ex. 1109, at [0030], [0047].) Subscribers use their mobile devices in order to provide their location to a merchant and to receive information about a merchant based on their location. (Id.)

243. Callegari describes that its method for providing electronic coupons “includes receiving information from a consumer device that includes an indication of the consumer’s location.” (Ex. 1109, at [0011], see also id. at [0059].) For

\(^{5}\) Callegari’s specification uses reference number 69 for the databases, although that appears to be a typo. The databases in Fig. 5B are shown with reference number 67.
example, a merchant presence server implementing the coupon service can receive an indication of a user’s location from the user’s device, and push an electronic coupon to the user’s device.  (*Id.* at [0047]-[0048], [0059], [0103]-[0104].)  A person of ordinary skill would have recognized this as real-time data about the member’s location.

244. Users subscribe to Callegari’s merchant presence service in order to receive electronic coupons.  (Ex. 1109, at [0030], [0111].)  When Callegari’s system presents a coupon on a consumer’s mobile device, “the consumer’s identity is also received and stored.”  (*Id.* at [0107].)  A person of ordinary skill in the art would have recognized that identity as information about a member, including “attributes of a consumer” received as consumer defined profile information.  (*Id.* at [0012].)  Information regarding users is stored with a merchant presence server.  (*Id.* at [0052].)

245. To the extent Callegari does not expressly disclose that the real-time data is received from a mobile communication device of at least one member presently or recently at a venue, Callegari renders that limitation obvious.

246. Restaurants are an example of a merchant described in Callegari, as well as an example of a venue described in the ’360 Patent.  (*’360 Patent at 5:32-37.*)  As shown below, annotated Fig. 6A, Fig. 6B, and Fig. 10A depict a
Starbucks coffee shop customizing its merchant presence using a website graphical user interface provided by Callegari’s merchant presence service:

<table>
<thead>
<tr>
<th>Figure</th>
<th>Image Depicting Restaurant Using Callegari’s Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 1109, Fig. 6A</td>
<td><img src="image1" alt="Image Depicting Restaurant Using Callegari’s Service" /></td>
</tr>
</tbody>
</table>

Exhibit 1114 Page 107
247. Callegari describes transmitting a merchant’s presence to a user—*i.e.*, an electronic coupon—when the user’s point of origin is essentially the same as the merchant’s point of origin or overlaps with the merchant’s point of origin. (Ex. 1109, at [0031], [0033], [0034].) The user’s point of origin is determined based on the merchant presence server receiving the user’s location. (*Id.* at [0011], [0047]-[0048], [0059], [0103]-[0104].)

248. Callegari describes a point of origin as an address and/or a set of coordinates that define a reference point for the center of the location. (*Id.* at [0066].) Callegari also describes that a merchant’s point of origin corresponds to where the merchant is located:

In one aspect, there are provided methods for merchants to transmit their presence to a consumer based on the consumer's area of interest 12 and the merchant's point of origin 2, 4 or 6. Merchants typically desire to make their presence known to consumers when the consumer is nearby, *i.e.*, when the consumer's point of origin and/or area of interest 12 is essentially the same as the
merchant's point of origin, overlaps with the merchant's point of origin, or comes within a service area targeted by the merchant. Conversely, the consumer is typically most interested in knowing of a merchant's presence when the consumer's area of interest 12 is near the merchant's point of origin. Accordingly, when the consumer is at point of origin 10 the consumer will preferably want to know of the merchant's presence at point of origin 2, when the consumer is at points 11 or 13 the consumer will preferably want to know of the merchants at points 4 or 6, respectively. When the consumer is at points 14 or 15, the consumer preferably wants to know of the merchants at points 2 and 4, or 4 and 6, respectively. (Ex. 1109, at [0033].)

249. A person of ordinary skill in the art would have recognized that because a merchant’s point of origin corresponds to where the merchant is located, when a user’s point of origin overlaps with the merchant’s point of origin, the user is at the merchant’s location. For a merchant that is a venue, such as a restaurant, that means the user is attending the venue.

250. Callegari notes that “the consumer is typically most interested in knowing of a merchant’s presence when the consumer’s area of interest 12 is near the merchant’s point of origin.” (Ex. 1109, at [0033].) Callegari also explains that a consumer can set his or her area of interest to be very small—”as small as the
width of a shop window,” for example. (Id. at [0031].) As such, a person of ordinary skill in the art would have recognized that a merchant’s point of origin and a consumer’s area of interest would intersect only when the consumer is on the merchant’s premises if the consumer has a very small area of interest.

251. It would have been an obvious design choice to have Callegari’s merchant presence server to receive indications of users’ locations and to transmit electronic coupons to those users only when those users are on the merchant’s premises, i.e., attending a venue such as a Starbucks coffee shop as disclosed in Callegari. A person of ordinary skill in the art would have been motivated to make that design choice because it would enable Callegari’s system to track which customers are actually attending a merchant’s premises, which Callegari already suggests doing via point-of-sale systems. (Ex. 1109, at [0107].) A person of ordinary skill in the art would have been motivated to track which customers are attending a venue in order to “establish statistics for marketing and specific targeting of consumers based on their coupon use” or based on their receipt of a coupon for attending the merchant’s premises. (Id.)
iv. **Sub-Branch (1)(A): processing said real-time data by**

(a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and

252. Callegari discloses a data processor processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue.

253. More specifically, Callegari discloses a data processor processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, said processing to provide processed data comprising a demographic of said attendees at said venue.

254. As discussed above, Callegari teaches that when a customer indicates their presence within a venue, the customer’s identity and location can be provided...
to Callegari’s merchant presence server. For example, a merchant presence server implementing the coupon service can receive an indication of a user’s location from the user’s device, and push an electronic coupon to the user’s device. (Ex. 1109, at [0011], [0047]-[0048], [0059], [0103]-[0104].) A person of ordinary skill would have recognized this as real-time data about the member’s location.

255. When Callegari’s system presents a coupon on a consumer’s mobile device, “the consumer’s identity is also received and stored.” (Ex. 1109, at [0107].) A person of ordinary skill in the art would have recognized that identity as information about a member, including “attributes of a consumer” received as consumer defined profile information. (Id. at [0012].) Information regarding users is stored with a merchant presence server. (Id. at [0052].)

256. Callegari describes that its merchant presence server can compute and present demographic statistics for use in targeted marketing based on consumers’ attributes. “Optionally, the GUI 38 includes a demographic statistics link 50 that enables the merchant to track the activity and/or identity of consumers that receive a transmission of the merchant's presence over time.” (Ex. 1109, at [0053].) Callegari also describes merchant applications that may include “demographic statistics and other tracking features that enable the merchant to keep records of contact with customers.” (Id.) “The merchant may also obtain demographic and
statistical data regarding consumers, which can be used to improve the overall business of the merchant as well [as] future coupon campaigns.” (Id. at [0110].)

v. communicating to a recipient said processed data.

257. Callegari discloses a data processor communicating to a recipient said processed data.

258. Callegari describes that its merchant presence server can compute and present demographic statistics for use in targeted marketing based on consumers’ attributes. “Optionally, the GUI 38 includes a demographic statistics link 50 that enables the merchant to track the activity and/or identity of consumers that receive a transmission of the merchant's presence over time.” (Ex. 1109, at [0053].) Callegari also describes merchant applications that may include “demographic statistics and other tracking features that enable the merchant to keep records of contact with customers.” (Id.) “The merchant may also obtain demographic and statistical data regarding consumers, which can be used to improve the overall business of the merchant as well [as] future coupon campaigns.” (Id. at [0110].)

2. Claim 2, Branch (1), Sub-Branch (1)(A)

259. Claim 1 and Claim 2 and are identical from a technical standpoint. The only difference is that Claim 1 is a system claim comprising a data processor that performs certain steps and Claim 2 is a method claim employing a data processor that performs those same steps. That difference is not material. Claim 2
is obvious over Callegari for the same reasons as Claim 1, following the same path through Claim 2’s branches as through Claim 1’s branches.

i. **Preamble:** A method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor

260. As I explained above, the only difference between Claim 1 and Claim 2 is that Claim 1 is a system claim comprising a data processor that performs
certain steps and Claim 2 is a method claim employing a data processor that performs the same steps. That difference would not be material to a person of ordinary skill in the art. The portions of Callegari I cited for the preamble of Claim 1 in Sections XI.B.1.i and XI.B.1.ii disclose a method for providing a service to venues where people aggregate, said people comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor.

ii. Branch (1): receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and

261. This limitation is the same as Claim 1, Branch (1). For the reasons I explained above in Section XI.B.1.iii for Claim 1, Branch (1), Callegari renders obvious a data processor receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue.
iii. Sub-Branch (1)(A): processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and

262. This limitation is the same as Claim 1, Branch (1), Sub-Branch (1)(A).

For the reasons I explained above in Section XI.B.1.iv for Claim 1, Branch (1), Sub-Branch (1)(A), Callegari discloses a data processor processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue.

263. More specifically, for the reasons I explained above in Section XI.B.1.iv, Callegari discloses a data processor processing said real-time data by (a) correlating said information about said attendees at said venue with trait
information of said member on said data processor, said processing to provide processed data comprising a demographic of said attendees at said venue.

iv. communicating to a recipient said processed data.

264. This limitation is the same limitation that appears in Claim 1. For the reasons I explained above in Section XI.B.1.v, Callegari discloses a data processor communicating to a recipient said processed data.

3. Claim 3, Branch (A)

265. Claim 3, Branch (A) is identical to Claim 1, Branch (1), Sub-Branch (A). Claim 3 is obvious over Callegari for the same reasons as Claim 1.

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

266. This preamble is the same as the preamble of Claim 1. For the reasons I explained above in Section XI.B.1.i, Callegari discloses a system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue.
ii. a data processor, said data processor:

267. This limitation is the same as the data processor limitation of Claim 1. For the reasons I explained above in Section XI.B.1.ii, Callegari discloses a data processor.

iii. receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and

268. This limitation is the same as Branch (1) of Claim 1. For the reasons I explained above in Section XI.B.1.iii, Crowley renders obvious a data processor receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue.

iv. Branch (A): processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and.

269. This limitation is the same as Claim 1, Branch (1), Sub-Branch (1)(A). For the reasons I explained above in Section XI.B.1.iv for Claim 1, Branch (1), Sub-Branch (1)(A), Callegari discloses a data processor processing said real-time
data by (a) correlating said information about said attendees at said venue with trait
information of said member on said data processor, or (b) combining real-time data
from a plurality of members, when said data processor receives real-time data
comprising information about said attendees at said venue from a mobile
communication device of at least a second member presently or recently at said
venue; said processing to provide processed data comprising a demographic of said
attendees at said venue.

270. More specifically, for the reasons I explained above in Section XI.B.1.iv, Callegari discloses a data processor processing said real-time data by (a)
correlating said information about said attendees at said venue with trait
information of said member on said data processor, said processing to provide
processed data comprising a demographic of said attendees at said venue.

v. communicating to a recipient said processed data.

271. This limitation is the same limitation that appears in Claim 1. For the
reasons I explained above in Section XI.B.1.v, Callegari discloses a data processor
communicating to a recipient said processed data.

4. Claim 7

272. In my opinion, Claim 7 is obvious over Callegari.
i. A system according to Claim 3,

273. Callegari renders obvious a system according to Claim 3, as explained above in Section XI.B.3.

ii. wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for the present time.

274. Callegari discloses wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for the present time.

275. As discussed above, Callegari teaches that when a customer indicates their presence within a venue, the customer’s identity and location are provided to Callegari’s merchant presence server. For example, a merchant presence server implementing the coupon service can receive an indication of a user’s location from the user’s device, and push an electronic coupon to the user’s device. (Ex. 1109, at [0011], [0047]-[0048], [0059], [0103]-[0104].) A person of ordinary skill would have recognized this as real-time data about the member’s location.

276. When Callegari’s merchant presence server presents a coupon on a consumer’s mobile device, “the consumer’s identity is also received and stored.” (Ex. 1109, at [0107].) A person of ordinary skill in the art would have recognized that identity as information about a member, including “attributes of a consumer”
received as consumer defined profile information.  (Id. at [0012].)  Information regarding users is stored with a merchant presence server.  (Id. at [0052].)

277.  Callegari describes that its merchant presence server can compute and present demographic statistics for use in targeted marketing based on consumers’ attributes.  “Optionally, the GUI 38 includes a demographic statistics link 50 that enables the merchant to track the activity and/or identity of consumers that receive a transmission of the merchant's presence over time.”  (Ex. 1109, at [0053].)

278.  A person of ordinary skill in the art would have recognized that Callegari’s merchant presence server keeps up-to-date records of consumers that indicate their presence at a merchant, as well as the identity of those consumers.  Accordingly, the demographic statistics that Callegari describes can be presented to a merchant include a demographic of attendees at the venue for the present time.  (Ex. 1109, at [0053].)

5.  Claim 8

279.  In my opinion, Claim 8 is obvious over Callegari.

i.  A system according to Claim 3,

280.  Callegari renders obvious a system according to Claim 3, as explained above in Section XI.B.3.
ii. wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for a recent time.

281. Callegari discloses wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for a recent time.

282. Callegari describes providing merchants with demographic statistics for use in subsequent coupon campaigns. “The merchant may also obtain demographic and statistical data regarding consumers, which can be used to improve the overall business of the merchant as well [as] future coupon campaigns.” (Ex. 1109, at [0110].)

283. A person of ordinary skill in the art would have recognized that a merchant using the demographic information from a first coupon campaign for a second, later coupon program implies that the demographic information from the first coupon campaign must be from the past—though still recent enough to be useful for the second coupon campaign.

6. Claim 11

284. In my opinion, Claim 11 is obvious over Callegari.

i. A system according to claim 3,

285. Callegari renders obvious a system according to Claim 3, as explained above in Section XI.B.3.
ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

286. Callegari discloses wherein said data processor comprises a computer server.

287. Callegari describes a presence server 30 that can include a web server 62 and a database 67. (Ex. 1109, at Fig. 5B, [0021], [0056].) A block diagram of the presence server in Callegari’s expanded system 60 is shown below:

![Block diagram of presence server](Fig. 5B)

(Ex. 1109, at Fig. 5B.)

288. The presence server 30 can include databases as shown in Fig. 5B:

The expanded system 60 typically includes various databases 69 to keep information regarding the plurality of merchants consumers. In one embodiment, the database 69 is implemented using Oracle, but any suitable database technology can be used, such as Microsoft SQL server. The database 69 and respective
application software may be used to create systems for storing the “location” and “content” merchant information. In addition these databases may provide subscriber subsystems, billing subsystems, or administration subsystems to assist in commercial deployment of the system to serve a variety of users and markets. (Ex. 1109, at [0058].)

7. Claim 12

289. In my opinion, Claim 12 is obvious over Callegari.

i. A system according to claim 3,

290. Callegari renders obvious a system according to Claim 3, as explained above in Section XI.B.3.

6 Callegari’s specification uses reference number 69 for the databases, although that appears to be a typo. The databases in Fig. 5B are shown with reference number 67.
ii. wherein said data processor comprises information of a reward and informs said member of said reward receivable by said member for (a) providing said trait information, (b) providing said real-time data, (c) providing said demographic of attendees, (d) providing said characteristic of said venue, (e) accepting a venue's promotion, (f) accepting a sponsor's promotion, (g) recruiting new members or (h) having become a member of said organization.

291. Callegari renders obvious wherein said data processor comprises information of a reward and informs said member of said reward receivable by said member for (a) providing said trait information, (b) providing said real-time data, (c) providing said demographic of attendees, (d) providing said characteristic of said venue, (e) accepting a venue's promotion, (f) accepting a sponsor's promotion, (g) recruiting new members or (h) having become a member of said organization.

292. Callegari describes that its merchant presence server comprises information of a reward. Callegari’s merchant presence server can be used to customize coupons and then present coupons to consumers, such as the coupon shown in Fig. 10A of Callegari. (Ex. 1109, at Fig. 10A, [0029]-[0048], [0056].)

293. Further, as discussed above in Section XI.B.1.iii, it would have been an obvious design choice to have Callegari’s merchant presence system receive indications of users’ locations and to transmit electronic coupons to those users—thereby informing the user of the reward and causing the user to actually receive the reward—when those users are on the merchant’s premises, i.e., attending a
venue such as a Starbucks coffee shop as disclosed in Callegari. A person of ordinary skill in the art would have been motivated to make that design choice because it would enable Callegari’s system to track which customers are actually attending a merchant’s premises, which Callegari already suggests doing via point-of-sale systems. (Ex. 1109, at [0107].) A person of ordinary skill in the art would have been motivated to track which customers are attending a venue in order to “establish statistics for marketing and specific targeting of consumers based on their coupon use” or based on their receipt of a coupon for attending the merchant’s premises. (Id.)

8. Claim 13

294. In my opinion, Claim 13 is obvious over Callegari.

   i. A system according to claim 12,

295. Callegari renders obvious a system according to Claim 12, as explained above in Section XI.B.7.

   ii. wherein said reward is receivable at said venue.

296. Callegari renders obvious wherein said reward is receivable at said venue. As discussed above in Section XI.B.1.iii, it would have been an obvious design choice to have Callegari’s merchant presence server receive indications of users’ locations and to transmit electronic coupons to those users only when those users are on the merchant’s premises, i.e., attending a venue such as a Starbucks.
coffee shop as disclosed in Callegari. A person of ordinary skill in the art would have been motivated to make that design choice because it would enable Callegari’s system to track which customers are actually attending a merchant’s premises, which Callegari already suggests doing via point-of-sale systems. (Ex. 1109, at [0107].) A person of ordinary skill in the art would have been motivated to track which customers are attending a venue in order to “establish statistics for marketing and specific targeting of consumers based on their coupon use” or based on their receipt of a coupon for attending the merchant’s premises. (Id.)

9. Claim 14

297. In my opinion, Claim 14 is obvious over Callegari.

i. A system according to claim 13,

298. Callegari renders obvious a system according to Claim 13, as explained above in Section XI.B.8.

ii. wherein said reward comprises promotional material, rewards points, cash, credit, a coupon, a discount or organization honors.

299. Callegari discloses wherein said reward comprises promotional material, rewards points, cash, credit, a coupon, a discount or organization honors.

300. Callegari’s discloses an example electronic coupon that serves as promotional material for a Starbucks coffee shop. Callegari’s example electronic coupon provides a 10% discount at a Starbucks coffee shop.
<table>
<thead>
<tr>
<th>Figure</th>
<th>Image Depicting Restaurant Using Callegari’s Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 1109, Fig. 6A</td>
<td><img src="merchants_setup_for_starbucks.png" alt="Image of restaurant setup for Starbucks" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 6B</td>
<td><img src="category_and_keywords.png" alt="Category and Keywords" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 10A</td>
<td><img src="coupon_title.png" alt="Coupon Title" /></td>
</tr>
</tbody>
</table>
10. Claim 15

301. In my opinion, Claim 15 is obvious over Callegari.

i. A system according to claim 14,

302. Callegari renders obvious a system according to Claim 14, as explained above in Section XI.B.9.

ii. wherein said promotional material comprises, or said rewards points are used to receive, drink specials, cover charge discounts, access to VIP lounges, transportation offers, parking specials, food specials, merchandise offers, lodging specials, music downloads, passes to events or retail gift cards.

303. Callegari discloses wherein said promotional material comprises, or said rewards points are used to receive, drink specials, cover charge discounts, access to VIP lounges, transportation offers, parking specials, food specials, merchandise offers, lodging specials, music downloads, passes to events or retail gift cards.

304. Callegari’s discloses an example electronic coupon that serves as promotional material for a Starbucks coffee shop. Callegari’s example electronic coupon provides a 10% discount at a Starbucks coffee shop, which a person of ordinary skill in the art would have recognized as a food special, drink special, or merchandise offer.

///
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<tbody>
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<td>Ex. 1109, Fig. 6A</td>
<td><img src="Image" alt="Merchants Setup for Starbucks" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 6B</td>
<td><img src="Image" alt="Category and Keywords" /></td>
</tr>
<tr>
<td>Ex. 1109, Fig. 10A</td>
<td><img src="Image" alt="Coupon Title" /></td>
</tr>
</tbody>
</table>
11. Claim 16

305. In my opinion, Claim 16 is obvious over Callegari.

i. A system according to claim 15,

306. Callegari renders obvious a system according to Claim 15, as explained above in Section XI.B.10.

ii. wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

307. Callegari discloses wherein said data processor comprises a computer server, as discussed above in Section XI.B.6.ii with respect to Claim 11.

12. Claim 22

308. In my opinion, Claim 22 is obvious over Callegari.

i. Preamble: A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

309. This preamble is the same as the preamble of Claim 1. For the reasons I explained above in Section XI.B.1.i, Callegari discloses a system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having
mobile communication devices, said system requiring at least one member to attend a venue.

ii. a data processor, said data processor:

310. This limitation is the same as the data processor limitation of Claim 1. For the reasons I explained above in Section XI.B.1.ii, Callegari discloses a data processor.

iii. receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue,

311. This limitation is the same as Branch (1) of Claim 1. For the reasons I explained above in Section XI.B.1.iii, Callegari renders obvious a data processor receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue.

iv. said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device;

312. Callegari discloses said real-time data comprising location information of said member provided by (1) a position-sensing device, or (2) said member checking-in using said mobile communication device.
313. I understand that Callegari does not need to disclose both alternatives to meet this claim limitation, but nevertheless, Callegari discloses both alternatives, and I discuss both alternatives below.

314. Callegari describes that its subscribers have mobile communication devices, such as mobile telephones, mobile computers, personal digital assistants, Blackberries, and the like. (Ex. 1109, at [0030], [0047].) Subscribers use their mobile devices in order to provide their location to a merchant and to receive information about a merchant based on their location. (Id.)

315. Callegari describes that its method for providing electronic coupons “includes receiving information from a consumer device that includes an indication of the consumer’s location.” (Ex. 1109, at [0011], see also id. at [0059].) That indication can be provided in at least two ways in Callegari.

316. First, Callegari discloses said real-time data comprising location information of said member provided by (1) a position-sensing device. Callegari describes a “sensing mode” that employs GPS to transmit the user’s location to merchants.

In the sensing mode, the consumer device continuously or (periodically) transmits changing indications of the consumer's point of origin as the consumer moves from location to location. The sensing mode typically requires that the consumer device be equipped with position
detection equipment, such as a GPS or other system that allows the consumer's location to be tracked. In the sensing mode, the consumer obtains continuously changing information regarding the merchant's presence, which corresponds to merchants located in proximity to the consumer's continuously changing positions. (Ex. 1109, at [0038]; see also id. at [0044]-[0045].)

317. Second, Callegari discloses said real-time data comprising location information of said member provided by (2) said member checking-in using said mobile communication device. Callegari describes a “site mode” or “request mode” in which a user indicates his or her location to the merchant presence server.

In the site mode, the consumer transmits a single indication of a particular location, typically defined by an exact point of origin such as an address, and receives only information regarding merchants at that particular location. For example, if the consumer device transmits “101 Main Street, Small Town”, only merchants located at that building address in Small Town transmit their presence to the consumer device. The request mode is, therefore, limited to information for a single location. (Ex. 1109, at [0037].)

318. A person of ordinary skill in the art would have recognized that the “site mode” or “request mode” described in Callegari is a user checking in from his
or her mobile communication device, in that the user is manually indicating his or her presence at a particular location via a request. For example, Crowley, which was filed in May 2005, refers to the process of a user texting their current location to the Dodgeball social networking system as “checking in.” (Ex. 1108, at 13:18-25.) The below annotated figure illustrates what Crowley refers to as a “check-in.”

To send yourself a sample dodgeball message, click here.

(Ex. 1108, at Fig. 11 (annotations added).)

319. As can be seen, Crowley’s “check in” is a text message whereby a user indicates his or her location at a venue to the Dodgeball social networking system. What Crowley explicitly calls a “check in” is identical to how a user can use the “site mode” or “request mode” in Callegari to indicate his or her presence at an establishment.
v. correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue; and

320. Callegari renders obvious a data processor correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue.

321. This limitation is essentially the same as Claim 1, Sub-Branch (1)(A), Sub-Sub-Branch (1)(A)(a). Callegari renders obvious this limitation for same reasons discussed above in Section XI.B.1.iv.

vi. communicating to a recipient said demographic of attendees at said venue.

322. Callegari discloses a data processor communicating to a recipient said demographic of attendees at said venue.

323. This limitation is similar to the “communicating to a recipient said processed data” limitation of Claim 1. Thus, the disclosure I identified as disclosing the “communicating to a recipient said processed data” limitation of Claim 1 in Section XI.B.1.v also discloses a data processor communicating to a recipient said demographic of attendees at said venue.

13. Claim 23

324. In my opinion, Claim 23 is obvious over Callegari.
A system according to claim 22

Callegari renders obvious a system according to Claim 22, as explained above in Section XI.B.12.

consisting of (1).

As explained above, I understand that IBM contends that the broadest reasonable interpretation of “consisting of (1)” includes “wherein said real-time data comprising location information of said member is provided by (1) a position-sensing device.”

Callegari discloses wherein said real-time data comprising location information of said member is provided by (1) a position-sensing device. Callegari describes a “sensing mode” that employs GPS to transmit the user’s location to merchants.

In the sensing mode, the consumer device continuously or (periodically) transmits changing indications of the consumer's point of origin as the consumer moves from location to location. The sensing mode typically requires that the consumer device be equipped with position detection equipment, such as a GPS or other system that allows the consumer's location to be tracked. In the sensing mode, the consumer obtains continuously changing information regarding the merchant's presence, which corresponds to merchants located in proximity to...
the consumer's continuously changing positions. (Ex. 1109, at [0038]; see also id. at [0044]-[0045].)

14. Claim 24

328. In my opinion, Claim 24 is obvious over Callegari.

i. A system according to claim 22

329. Callegari renders obvious a system according to Claim 22, as explained above in Section XI.B.12.

ii. consisting of (2).

330. As explained above, I understand that IBM contends that the broadest reasonable interpretation of “consisting of (2)” includes “wherein said real-time data comprising location information of said member is provided by (2) said member checking-in using said mobile communication device.”

331. Callegari discloses wherein said real-time data comprising location information of said member is provided by (2) said member checking-in using said mobile communication device. Callegari describes a “site mode” or “request mode” in which a user indicates his or her location to the merchant presence server.

In the site mode, the consumer transmits a single indication of a particular location, typically defined by an exact point of origin such as an address, and receives only information regarding merchants at that particular location. For example, if the consumer device transmits
“101 Main Street, Small Town”, only merchants located at that building address in Small Town transmit their presence to the consumer device. The request mode is, therefore, limited to information for a single location. (Ex. 1109, at [0037].)

332. A person of ordinary skill in the art would recognize that the “site mode” or “request mode” described in Callegari is a user checking in from his or her mobile communication device, in that the user is manually indicating his or her presence at a particular location. For example, Crowley, which was filed in May 2005, refers to the process of a user texting their current location to the Dodgeball social networking system as “checking in.” (Ex. 1108, at 13:18-25.) The below annotated figure illustrates what Crowley refers to as a “check-in.”
333. As can be seen, Crowley’s “check in” is a text message whereby a user indicates his or her location at a venue to the Dodgeball social networking system. What Crowley explicitly calls a “check in” is identical to how a user can use the “site mode” or “request mode” in Callegari to indicate his or her presence at an establishment.

C. Secondary Considerations

334. The specification of the ’360 Patent alleges that “There is substantial interest in providing venues, such as night clubs and bars, with information that allows them to attract clientele to their venue based on the demographics of people at the venue and the desired demographics that the venue wishes to achieve.”
To the extent that “substantial interest” could conceivably be a long-felt need, that need was already met by the prior art.

335. For example, Crowley describes determining a common demographic trait of users in a geographic area that can include various venues, and then scheduling a square dance at a venue for users with that demographic trait. (Ex. 1108, at 18:38-39, 19:13-16.) During a square dance, “the system may identify the common characteristic through messages to the users, and then suggest topics of conversation, or otherwise provide suggestions or assistance in making the group’s social interaction better. In this manner, the system may act as an active catalyst for group social interaction.” (Id. at 17:43-48.) Crowley also notes that once a square dance is complete, a “summary report” can be provided to organizers of the event (i.e., a venue hosting the square dance), at the very least suggesting that the common demographic trait that Crowley identifies among the square dance users at the host venue can be provided to that venue. (Id. at 19:40-43.)

336. Similarly, Callegari discloses tracking the demographics of users who receive electronic coupons and redeem those electronic coupons at merchants such as restaurants. Callegari describes that its merchant presence server can compute and present demographic statistics for use in targeted marketing based on consumers’ attributes. “Optionally, the GUI 38 includes a demographic statistics link 50 that enables the merchant to track the activity and/or identity of consumers...
that receive a transmission of the merchant's presence over time.” (Ex. 1109, at [0053].) Callegari also describes merchant applications that may include “demographic statistics and other tracking features that enable the merchant to keep records of contact with customers.” (Id.) “The merchant may also obtain demographic and statistical data regarding consumers, which can be used to improve the overall business of the merchant as well [as] future coupon campaigns.” (Id. at [0110].)

337. If Groupon argues or presents evidence that secondary considerations support the non-obviousness of the challenged claims in this proceeding, I reserve the right to give another declaration to address those arguments and evidence.

///
XII. APPENDIX A: THE CHALLENGED CLAIMS OF THE ’360 PATENT

1. A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

- a data processor, said data processor:
  - (1) receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and
  - (A) processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and
  - communicating to a recipient said processed data;
  - (B) communicating to a recipient said real-time data comprising a demographic of said attendees at said venue; or
  - (C) combining real-time data comprising a characteristic of said venue from a plurality of members to provide a combined characteristic of said venue, when said data processor receives real-time data comprising a characteristic of said venue from mobile communication devices of a plurality of members presently or recently at said venue; and
  - communicating to a recipient said combined characteristic of said venue;

- or

  - (2) comprising information of a reward;
  - performing in the following order:
    - prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;
    - receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;
processing said indicating to provide processed data comprising
(A) the real-time location of said member, (B) a trait of said member,
wherein said data processor comprises said trait, (C) a demographic of
attendees at said venue, wherein said data processor comprises said
demographic of attendees at said venue, or (D) a combined
characteristic of said venue, wherein said data processor comprises
said combined characteristic of said venue; and
communicating to a recipient said processed data.

2. A method for providing a service to venues where people aggregate, said
people comprising members associated with an organization for processing and
transmitting information to said venues, said members or non-members, said
members having mobile communication devices, said method requiring at least one
member to attend a venue, said method employing a data processor:
(1) receiving real-time data comprising information about a venue or
attendees at said venue from a mobile communication device of at least one
member presently or recently at said venue; and
(A) processing said real-time data by (a) correlating said
information about said attendees at said venue with trait information
of said member on said data processor, or (b) combining real-time
data from a plurality of members, when said data processor receives
real-time data comprising information about said attendees at said
venue from a mobile communication device of at least a second
member presently or recently at said venue; said processing to provide
processed data comprising a demographic of said attendees at said
venue; and
communicating to a recipient said processed data;
(B) communicating to a recipient said real-time data comprising
a demographic of said attendees at said venue; or
(C) combining real-time data comprising a characteristic of said
venue from a plurality of members to provide a combined
characteristic of said venue, when said data processor receives real-
time data comprising a characteristic of said venue from mobile
communication devices of a plurality of members presently or
recently at said venue; and
communicating to a recipient said combined characteristic of
said venue;
or
(2) comprising information of a reward; performing in the following
order: prior to a member being in a venue, informing said member of said
reward that is receivable upon said member indicating in real time said member's presence in said venue; receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable; processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and communicating to a recipient said processed data.

3. A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

   a data processor, said data processor:

   receiving real-time data comprising information about a venue or attendees at said venue from a mobile communication device of at least one member presently or recently at said venue; and

   (A) processing said real-time data by (a) correlating said information about said attendees at said venue with trait information of said member on said data processor, or (b) combining real-time data from a plurality of members, when said data processor receives real-time data comprising information about said attendees at said venue from a mobile communication device of at least a second member presently or recently at said venue; said processing to provide processed data comprising a demographic of said attendees at said venue; and

   communicating to a recipient said processed data;

   (B) communicating to a recipient said real-time data comprising a demographic of said attendees at said venue; or

   (C) combining real-time data comprising a characteristic of said venue from a plurality of members to provide a combined characteristic of said venue, when said data processor receives real-time data comprising a characteristic of said venue from mobile communication devices of a plurality of members presently or recently at said venue; and
communicating to a recipient said combined characteristic of said venue.

7. A system according to claim 3, wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for the present time.

8. A system according to claim 3, wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for a recent time.

11. A system according to claim 3, wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

12. A system according to claim 3, wherein said data processor comprises information of a reward and informs said member of said reward receivable by said member for (a) providing said trait information, (b) providing said real-time data, (c) providing said demographic of attendees, (d) providing said characteristic of said venue, (e) accepting a venue's promotion, (f) accepting a sponsor's promotion, (g) recruiting new members or (h) having become a member of said organization.

13. A system according to claim 12, wherein said reward is receivable at said venue.

14. A system according to claim 12, wherein said reward comprises promotional material, rewards points, cash, credit, a coupon, a discount or organization honors.

15. A system according to claim 14, wherein said promotional material comprises, or said rewards points are used to receive, drink specials, cover charge discounts, access to VIP lounges, transportation offers, parking specials, food specials, merchandise offers, lodging specials, music downloads, passes to events or retail gift cards.

16. A system according to claim 15, wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

22. A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said
members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

a data processor, said data processor:

receiving real-time data comprising information about attendees at said venue from a mobile communication device of at least one member presently or recently at said venue, said real-time data comprising location information of said member provided by

(1) a position-sensing device, or

(2) said member checking-in using said mobile communication device;

correlating said location information with trait information of said member on said data processor to provide a demographic of attendees at said venue; and

communicating to a recipient said demographic of attendees at said venue.

23. A system according to claim 22 consisting of (1)

24. A system according to claim 22 consisting of (2).

27. A system for providing a service to venues where people aggregate, said system comprising members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said system requiring at least one member to attend a venue, said system comprising:

a data processor, said data processor:

comprising information of a reward;

performing in the following order:

prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;

receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue,
wherein said data processor comprises said combined characteristic of said venue; and communicating to a recipient said processed data.

29. A system according to claim 27, wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for the present time.

30. A system according to claim 27, wherein said communicated demographic of attendees at said venue or said communicated combined characteristic of said venue is for a recent time.

33. A system according to claim 27, wherein said data processor comprises (a) a computer server or (b) a processor in said mobile communication device.

34. A system according to claim 27, wherein said data processor transmits to said mobile communication device that said reward is receivable.

35. A system according to claim 27, wherein said indicating comprises a checkin.

41. A system according to claim 27, wherein said reward is provided by said venue or a sponsor, said reward receivable at said venue.

42. A system according to claim 27, wherein said reward is provided by said organization.

45. A system according to claim 27, wherein said informing is for: (a) providing trait information, (b) providing behavior information, (c) providing location information, (d) providing a demographic of attendees, (e) providing characteristic information, (f) accepting a venue's promotion, (g) accepting a sponsor's promotion, (h) recruiting new members or (i) having become a member of said organization.

46. A system according to claim 27, wherein said reward comprises promotional material, rewards points, a game, cash, credit, a coupon, a discount or organization honors.

49. A system according to claim 27, wherein said indicating does not comprise a request to receive said reward.
52. A method for providing a service to venues where people aggregate, said method employing members associated with an organization for processing and transmitting information to said venues, said members or non-members, said members having mobile communication devices, said method requiring at least one member to attend a venue, said method employing a data processor comprising information of a reward, said data processor performing in the following order:

   prior to a member being in a venue, informing said member of said reward that is receivable upon said member indicating in real time said member's presence in said venue;

   receiving said indicating from a mobile communication device of said member, whereby said reward becomes receivable;

   processing said indicating to provide processed data comprising (A) the real-time location of said member, (B) a trait of said member, wherein said data processor comprises said trait, (C) a demographic of attendees at said venue, wherein said data processor comprises said demographic of attendees at said venue, or (D) a combined characteristic of said venue, wherein said data processor comprises said combined characteristic of said venue; and

   communicating to a recipient said processed data.
APPENDIX B
SUMMARY OF EXPERIENCE

Over 25 years of leading edge product delivery in the high technology industry. Currently President and Senior Consulting Engineer of Switchback Software LLC, a successful consulting firm specializing in large-scale business, web, and wireless application development and deployment using the latest object oriented technologies. Clients have included Sun Microsystems and CBS/Switchboard. Served as CTO for social media ecommerce company. Served as CEO/CTO of Mobilogics focused on delivering Mobile device solutions. Served as Director of Engineering Business Development, Senior Design Engineer, Principal Engineer, and technical manager at various companies. Expertise in both domestic and international product delivery.

Technical strengths include full enterprise Java development, Java micro development, C, C++, object oriented design and architecture, distributed n-tier, component model, web architectures and mobile development. Extensive middle-tier and backend database experience with a variety of databases, ERP systems, and rule-based engines. Expertise and experience in Internet and connectivity technology, including social media, ecommerce, LBS, web design, and business application development. Summary of technologies including: Java, Enterprise Java Beans, JSP, Servlets, Struts, Web Services, JDBC, XML, XSL, HTML, VB, and User Security. System platforms expertise includes all versions of Windows and Unix.

Experienced and in-depth knowledge of a wide range of development tools and methodologies used in object-oriented design and architecture. These include integrated development environments (IDE), UML modeling tools, application servers, code generators, debuggers, various source control mechanisms, RUP and XP. Vendors include Sun Microsystems, Symantec, IBM, Borland, Metrowerks, Microsoft, and Rational.

Serves as a consultant and testifying expert in legal matters pertaining to software development, object oriented coding, Java technologies, mobile, location based services, database, web design/deployment, and security. Domestic and international patent infringement, non-infringement, invalidity, copyright issues, contract disputes.

Bestselling author, featured columnist for Microsoft.com and O’Reilly Networks, frequently requested speaker, industry advisor. Published as an expert and product reviewer in industry magazines that include Software Development, JavaPro, Devx.com, O’Reilly Networks, XML, and Enterprise Networking. Featured speaker at various technical conferences throughout the country and internationally. Member of Java Server Pages 2.1 Expert Group – JSR 245 of the Java Community Process.
PROFESSIONAL EXPERIENCE

1997 to Present  Switchback Software LLC
President & Consulting Engineer

- Technology and industry advisor for company regarding international data analytics.


- CEO/CTO Mobilogics LLC, establish Location Based Services/GIS based mobile device development, define business plan and development strategy.

- Mobile-Enterprise Integration Platform: Defined, implemented and productized a platform for high productivity mobile-enterprise integration. Includes Mobile-Enterprise Productivity Toolkit. Utilizes vendor neutral technologies and techniques. ‘One-touch’ build, package, release and deploy processes for both mobile and enterprise integration points utilizing numerous platform agnostic tools and utilities.

- ESRI Map Objects for Java 2.0 Training and Certification, February, 2004

- Co-wrote and delivered J2ME Boot Camp. 2.5 day technical training including modules: Mobile Basics, Building MIDlets, Advanced Topics, Best Practices, and Test Driven Development in the Mobile Space. Special attention to Location Based Services using GPS on Motorola devices.

- Architected and developed Location Based Service (LBS) mobile data services application to integrate with the City of Denver’s Geographic Information System. Included in-the-field data collection, server-side mapping and unit tracking with browser and Swing client. Built personal on-phone mapping (MIDP 1.0/2.0) service based upon live unit GPS location. Design, development, including team training and mentoring. Technologies include: J2ME, MIDP 2.0, CLDC 1.1, Motorola Position APIs

- Chief Business Engineer for VoCaliper, web-based voice authentication and security product. Technologies include: JSP/Servlets, J2EE, Struts, Java Sound, Cepstral voice authentication, Unix CVS

- Architect/Design Engineer for distributed web collaboration program for TwoJet Inc. Application allowed for graphic, video, and audio sharing between users within a company and between companies. Served as the CTO for the company. Switchback Software provided entire engineering team, DBA, and QA team for this startup company. Technologies include: Rational Rose UML modeling, J2EE, XML, XSL,
- Designed and implemented web-based software ordering and fulfillment system for Sun Microsystems used by all worldwide locations. All software products, including Solaris, shipped and released through Sun to their suppliers and customers utilized this system. Technologies include: J2EE, JSP, Servlets, Tag Libraries, JDBC 2.0, HTML, XML, SQL, Oracle 8i, Solaris, iPlanet, CVS

- Designed and implemented 3-tier Java application for Sun Microsystems. Provided access to multiple worldwide databases to provide mission critical information systems tracking of failure analysis. Technologies include: Java 2 platform Enterprise Edition, extensive Swing and JDBC 2.0, Servlets, JSP, HTML, SQL, Oracle 8i, Solaris, iPlanet, CVS


- Performance website updates for CBS/Switchboard.com, yellow and white page directory service. Top 10 active site on the Internet with over 1.5 million page hits per day. Technologies include: IIS 4.0, NT 4.0, HTML updates, CGI enhancements, active serve page updates for gift shop vendors. Additionally, updated entire development environment from VC++ 2.2 to VC++ 5.0.

- Designed and implemented web-based document and workflow management solution for RFK Partners Inc./NovaSoft Systems Inc. Includes integrating Novation product line with Parametric Technology’s CAD/CAM Pro/Intralink and Pro/Engineer systems. Technology and tools included: Java, Java Beans, VJ++.

- Designed and implemented GUI prototype for RFK Partners Inc/Spatial Technologies to demonstrate auto healing between CAD systems. Technology and tools included Java, Visual Café, ACIS.

- Design and implemented complete business system operations for startup company, including website, database applications, and contact management system. Technologies included HTML, mySQL, MS Access, Visual Basic.
1995 to 1997  OneWave, Inc.
Senior Design Engineer

- Designed multi-threaded distributed application DCOM based integration server product on NT platform using C++, Object-Oriented design and component model. Engineering work included: design and implementation of Object Oriented compiler used to interpret OneWave specific OO language called ObjectPower (compiler output supported by Unix and Windows systems), design of distributed communication systems and object management. Overall product provides both Internet and Intranet access to backend database and ERP systems. Product was backbone of the company's strategy. Company was taken public (NASDAQ:OWAV) on the successful delivery of this product.

- Technical liaison and design engineer to Japanese development team supporting integration workflow, rule design, and corporate production rollout to NEC Technologies, Toyota, and Asahi corporations.

- Designed and implemented product security model using RSA cryptography technology and SSL

- Designed and implemented asynchronous communication mechanism over TCP/IP using Winsock.

- Managed seven engineers. Integration technologies included SAP, PeopleSoft, CORBA, DCE, OLE automation, ODBC and Entera Middleware.

Director, Engineering Business Development

- Managed group of 15+ whose expertise ranged from entry-level through first-line management.

- Responsible for a wide range of functions: development, engineering/business office, quality engineering, & customer support.

- Accountable for budget in excess of $1M hiring, firing, compensation, performance evaluations and capital equipment purchases.

- Drove international product definition and delivery requirements for several products including contract negotiations, product marketing, joint development, and QE control.

- Led effort to generate and complete full company business plan for presentation to Board of Directors.

- Accountable for generating product requirements, product road map, and communications of all development schedules and deliverables company-wide.
• Participated in both internal and external executive level presentations and decision-making meetings with domestic and international companies.

1990 to 1995  Banyan Systems Inc.
Principal Software Engineer

• Provided technical leadership for 4-person development team through product development cycle.

• Responsible for defining engineering scope and providing functional and design specifications.

• Project design included client/server distributed RPC technology.

• Engineering deliverable included NLM development for NetWare 4.1 support, UNIX services support, Windows Management Tool, OS/2 and DOS client platform development efforts.

Program Manager

• Responsible for 15-member program team and 40-member extended team effort to deliver final domestic and international product. Included producing complete program schedule, delivering executive status reports, and designing product and program specifications. Involved providing leadership, enabling effective communication across business units, and handling project-related personnel issues.

• Deliverables included UNIX-based services, DOS clients, Windows Management Tool, NetWare 3.x and 4.x NLMs, Enterprise Network Service (ENS) Information Query (on-line documentation).

• Managed product development/delivery from marketing requirements through first customer ship.

Senior Software Engineer

• Responsible for strategy, design and implementation of installation procedures for Enterprise Networking Service (UNIX-based) and NetWare servers. Designed changes and implemented user management functionality to manage local identities with security information distributed in multiple directory services on StreetTalk and NetWare servers.

• Responsible for ENS product internationalization and development of language translation tools for multiple product releases.
Susan Spielman

- Responsible for full software development product cycle for Hangul VINES using the Korean government standard 8-bit, 2-byte Hangul code set.

- Designed and implemented Network Time Service, Remote Server Console in VINES 5.0.

- Responsible for supporting VINES Asynchronous Service, including X.29.

1986 to 1990 Data General Corp.
Software Engineer I, II

- Project Leader for conversion of a distributed office automation application. TCP/IP communication. Included mail, file transfer, and object database services.

- Project Leader/Program Manager: Open LAN Software Developer's Kit. Promoted distributed applications development in the Novell Portable NetWare and LAN Manager environment. UNIX platform, TLI-NetBIOS transport support.

EDUCATION

MS, Computer Information Systems, Boston University, 1991  
Concentration in Business Management  
BS, Computer Science, University of New York at Stony Brook, 1986  
Minor in Business Administration

LITIGATION SUPPORT EXPERIENCE  
(underline indicates Party engagement)

(Matter: Validity and patent infringement before the Patent Trial and Appeal Board  
Project: Consulting and testifying expert for IBM regarding matters before the PTAB concerning validity and infringement concerning method and system for runtime user account creation in single-sign-on processes in Federated computing environments.  
Client: Desmarais LLP, NY  
Date: 2016 - ongoing

Case: Data Engine Technologies LLC. v. International Business Machines Corp.; 6:13-cv-00860  
Matter: Patent infringement  
Project: Consulting and testifying expert for IBM regarding certain invalidity and non-infringement concerning RAD tool systems and Java development, five patents-in-suit. Non-infringement, invalidity reports issued.  
Deposition given Nov 2015.  
Client: Desmarais LLP, NY  
Date: 2015 – Settlement reached

Case: Evox Productions, LLC. v. Gabriels Technology Solutions, Inc et. al.; CV 00846-CJC-(RZx)  
Matter: Copyright and trademark infringement  
Client: Orrick, Herrington & Sutcliffe LLP, Los Angeles, CA  
Date: 2014 – Settlement reached

Case: Pi-Net International, Inc. v. JPMorgan Chase & Co.; 12-282-RGA  
Matter: Patent infringement
<table>
<thead>
<tr>
<th>Project</th>
<th>Consulting and testifying expert for JPMorgan Chase regarding certain invalidity and non-infringement concerning real-time transaction network access of web and mobile devices. Invalidity and non-infringement reports issued. Deposition given Dec 2013.</th>
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<tr>
<td>Client</td>
<td>Skadden, Arps, Slate, Meagher &amp; Flom LLP, NY</td>
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<td>Date</td>
<td>2013 – 2014 Court Ordered Summary Judgment and Invalidated all Patents-in-suit</td>
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<td>Case</td>
<td>Geotag Inc v. eBay Enterprises, et al; 2:12-cv-00043</td>
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<td>Matter</td>
<td>Patent infringement</td>
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<tr>
<th>Project</th>
<th>Consulting and testifying expert for eBay Enterprises and twenty other defendants who are eBay Enterprise customers of JDG, regarding non-infringement concerning network access of organized information based on geographical database and network searches. Code reviews, rebuttal report. Deposition given Oct 2013.</th>
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<td>Client</td>
<td>Orrick, Herrington &amp; Sutcliffe LLP, Orange County, CA</td>
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<tr>
<td>Date</td>
<td>2013 – 2014 Case dismissed</td>
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<tr>
<td>Case</td>
<td>Geotag Inc v. PetSmart, et al; 2:12-cv-00043</td>
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<th>Project</th>
<th>Testifying expert for Sharp concerning mobile devices and database network access. Non-infringement analysis, prior art reviews, reports.</th>
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<tr>
<td>Client</td>
<td>Gibson Dunn LLP, NY, NY</td>
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<td>Client</td>
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<td>2013 – Settlement reached</td>
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<td>Matter</td>
<td>Multiple Patent infringements</td>
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<td>2013 – Settlement reached</td>
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<tr>
<td>Case</td>
<td>Unwired Planet v. Apple, Inc.</td>
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<tr>
<td>Matter</td>
<td>Multiple Patent infringements</td>
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Project: Testifying expert for Apple concerning mobile devices and network access. Non-infringement analysis, prior art reviews, reports.
Client: Gibson Dunn LLP, NY, NY
Gibson Dunn LLP, Palo Alto, CA
Gibson Dunn LLP, Los Angeles, CA
Date: 2013 – 2014 - Settlement reached
Case: Geotag Inc v. Canon Inc. and, Canon U.S.A., Inc., 2:12-cv-00043
Matter: Consulting and testifying expert for Canon regarding non-infringement and invalidity concerning network access of organized information based on geographical database and network searches. Markman, code reviews, rebuttal report.
Client: Greenberg Traurig LLP, NY, NY
Date: 2013 – Settlement reached
Matter: Multiple Patent infringements
Project: Testifying expert for First National Bank of Omaha as part of a joint defense concerning user security and authentication, infringement contentions and claim construction. Prior art research, expert report, rebuttals, deposition.
Client: Kutak Rock LLP, Omaha, NE
Hogan Lovells LLP, Denver, CO
Date: 2012 – Settlement reached
Case: zvelo Inc. v. SonicWALL
Matter: Patent infringement
Project: Testifying expert for evaluation of multiple patents over ASP and application management and access, infringement contentions and claim construction. Prior art research, expert report, rebuttals.
Client: Kutak Rock LLP, Omaha, NE
Date: 2012 – 2015 - Settlement reached
Matter: Ten patents-in-suit infringement dispute over implementation of object-oriented code and procedural operating systems regarding personal mobile devices as well as network communications of mobile devices.
Project: Testifying expert, infringement code reviews, domestic industry evaluation, claim construction and charts, conception and reduction to practice reviews, prior art reviews, invalidity opinion and rebuttal reports. Multiple depositions given March 2011, Washington D.C.
U.S Court of International Trade trial April-May 2011, Washington D.C.
Client: Kirkland & Ellis LLP, Chicago, IL
Kirkland & Ellis LLP, New York, NY
Bridges & Mavrakakis LLP, Palo Alto, CA

Exhibit 1114 Page 159
Date: 2010-2011 – ALJ initial determination finds in favor of Apple. Final US Trade Commission ruling finds in favor of Apple on several claims.

Case: GraphOn Corporation v. MySpace Inc, Craigslist, Fox Audience Network Inc.

Matter: Multiple patent infringement disputes over implementation of automated online information services and directory as well as online dynamic payments used in websites.

Project: Patent research for prior art, Markman claim construction, claim charts, declaration, Deposition given August 2010.

Client: Watson Rounds LLP, Reno, NV

Date: 2010 - Settlement reached

Case: International Gamco Inc. v. Multimedia Games Inc.

Matter: Patent infringement dispute over distributed lottery gaming systems


Deposition given April 2010

Client: Kutak Rock LLP, Omaha, NE

Date: 2010 - Settlement reached

Case: SFA Systems LLC v. Omaha Steak International Inc.; et al;

Matter: Patent dispute over automated sales system.


Client: Kutak Rock LLP, Omaha, NE

Date: 2009-2010 – Settlement reached

Case: De Lage Landen v. Third Pillar Technologies Inc

Matter: Intellectual property dispute over corporate trade secrets.

Project: Full source code review of large scale corporate infrastructure product, correlation of use cases into entire software base, opinion and rebuttal reports, deposed Nov 2009, 3 day bench trial testimony Dec 2009 in the Eastern District of Pennsylvania, Bench testimony at Contempt Hearing.

Client: Blank Rome LLP, Philadelphia, PA

Date: 2009 – 2012 Settlement reached – Judge ruling in favor of DLL’s ownership of IP and corporate trade secrets with Permanent Injunction ordered against Third Pillar Technologies. Judge found Third Pillar in contempt of court and issued additional Contempt order.

Case: Dell Inc v. Lucent Technologies/Alcatel

Matter: Patent infringement dispute over implementation of web-based security for customizing restricted websites.

Project: Patent research for prior art, invalidity report, opinion and rebuttal reports, depositions given 9/2007, 3 week jury trial testimony on non-infringement and invalidity Jan 2008 in the Eastern District of Texas

Client: Kirkland & Ellis LLP, New York, NY
Date: 2004-2008 – Jury decision rendered in favor of non-infringement of Lucent avoiding $280M damages claim. Judge also made ruling in favor of Lucent for plaintiff to pay expert fees.

Case: GraphOn Corporation v. Classified Ventures LLC; Match.com, LLC; Yahoo! Inc.; eHarmony.com Inc.; and CareerBuilder, LLC
Matter: Multiple patent infringement disputes over implementation of automated online information services and directory as well as online dynamic payments used in websites.
Project: Patent research for prior art, Markman claim construction, multiple claim charts
Client: Watson Rounds LLP, Reno, NV
Date: 2008 – 2009 Settlements reached

Case: Bill Reid v. Charles Schwab, GM, Halliburton
Matter: Patent infringement
Project: Evaluation of multiple patents, Infringement contentions and claim construction. Invalidity reports.
Client: Nix Patterson LLP, Irvine, TX
Date: 2006 – 2007 Settlement reached

Matter: Multiple Patent infringements
Client: Boyle Partnerships P.C, Denver, CO
Date: 2006 – 2010 – Settlement reached

Matter: Multiple Patent infringements
Client: Greenberg Traurig LLP, NY, NY
Date: 2006 – 2007 - Case dismissed

Case: Hyperion Inc. v. HyperRoll Inc.
Matter: Patent infringement
Project: Evaluation of multiple patents, prior art research, Markman claim construction, deposition, and disclosed testifying expert
Client: Cooley Godward LLP Broomfield, CO
Date: 2005 – 2006 – Settlement reached

Case: 3i Infotech Inc v. Four Seasons Software LLC
Matter: Contract dispute on deliverables not meeting industry practices or production quality
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<td>Patent infringement</td>
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<td>Client:</td>
<td>Date:</td>
<td>Case:</td>
<td>Evaluation of source code, patent and prior art research, invalidity report, Markman claim construction</td>
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<td>Case:</td>
<td>Trieb v. StoreComm Inc &amp; Sam Elliot</td>
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<td>Case:</td>
<td>SGS Automotive Services Inc v.eFuel Inc</td>
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<td>InterTrust Technologies v. Microsoft Corporation</td>
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<td>DataDirect v. i-net software GmbH</td>
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<tr>
<td>Client:</td>
<td>Date:</td>
<td>Case:</td>
<td>Navidec, Inc. v. Excelon Corporation Case No. 01-RB-2254 (OES)</td>
</tr>
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</table>
Matter: Contract dispute involving the delivery of a Java-based Object Oriented database system.
Project: Evaluate and opine on the quality, functionality, and reliability of the Java based database system delivered by Excelon (f/k/a Object Store), based on the representations made to Navidec. Evaluate project records, web application architecture, as well Object Store database implementation. Wrote an expert report. Deposed Oct 7, 2002.
Client: Holme Roberts & Owen LLP, Denver CO
Date: 2002 - Settlement reached

Case: Websprocket v. NETSilicon Case No. C-00-20915 RMW EAI
Matter: Contract dispute involving the development of a Java code based embedded software system
Client: James E. Toothman & Associates, Los Gatos CA
Date: 2001
Outcome: Multi-million dollar settlement in favor of Websprocket based on deposition.

PUBLICATIONS

Summary: bestselling author, featured columnist, frequently requested speaker, industry advisor.

Books
- Pro J2EE 1.4: Professional to Expert – 2004 Apress
- The Web Conferencing Book – 2003 Amacom
- Complete Idiot’s Guide to JavaServer Pages – 2002 Pearson Education (technical expert for manuscript re-write)

Articles
- Feature writer for Microsoft.com on Information Management, Project Management, Team Collaboration
- Feature writer and JSP/Servlet columnist for O’Reilly Java Technical Network
- Selected by Sun Microsystems as industry blogger for java.net, the premier portal for Java development in the world.
Susan Spielman

- Weekly J2EE/Middleware columnist for JavaPro’s JavaInsight online newsletter published by Fawcette Communications
- Spielman S. 2017 Covering Your Assets 2.0 – SDJournal Magazine
- Spielman S. 2013 Covering Your Assets – Software Developer’s Journal Magazine
- Industry expert interview on Social Networking - The Chartered Financial Analyst (India), September 2009
- Spielman S. 2004, Java and GIS – java.net O’Reilly Networks, Jan 2004
- Spielman S. 2003, Small World product review – Software Development Magazine
Speaker

- Approximately 50 technical presentations throughout the US. Consistently rated one of the top speakers by audiences. Audience sizes range from 50-500.
- Featured speaker at JAOO, Denmark 2004
- O’Reilly Conference on Enterprise Java 2001

Technical Reviewer

- Elsevier, Digital Forensics
- Wrox Press publications, Beginning Java for Oracle, Professional JSP
- Prentice Hall publications, Distributed Java Technologies
- Java Content Expert for ReviewNet, Object Oriented Development web testing
- Apress publications, Voice Enabling Web Applications: VoiceXML and Beyond
- Morgan-Kaufmann publications, JSP: Practical Guide for Java Programmers

Industry Advisor

- Selected Member of Java Server Pages 2.1 Expert Group – JSR 245 of the Java Community Process
- Board of Director member for bSocial Networks Inc
- Technical advisory board member for BEA Systems Inc.
- Technical advisory board member for Metrowerks, Inc. a Motorola company.
- Judge for prestigious industry Jolt Awards, recognizing the best-of-breed innovative products in the high tech market.

Non-Profit Sector Advisor

- President, Board of Directors La Plata County Humane Society
- Board of Directors, member La Plata County Humane Society
APPENDIX C
Who is Sue?

- President of Switchback Software LLC
- Consulting Engineer with 18+ years of hands-on enterprise & mobile application development experience.
- Author, technology columnist, magazine contributor, JSR-245 EG member
What We’ll Talk About

- Thinking outside the enterprise
- Potential and pitfalls of mobile technology
- J2ME Mobile/Enterprise integration points
- Take a look at various mobile enterprise applications
Thinking Outside the Enterprise
Technology Convergence

- Internet
- GIS
- Backend Business Servers
- Wireless
- Mobile Devices
- Location Services
What are Pervasive Devices?

- A device that can be used anywhere, anytime and still have access to business rules and information
- Fairly inexpensive and easy carry
- Device that can come in and out of connectivity
- Device that is core to an enterprise’s value proposition
- Devices that have their own set of worries
Pervasive Device Challenges

- Usually can’t be centrally administered
- IT folks can go crazy trying to manage many devices that people carry around
- Many of the device management issues are both social and technical in nature

Let’s take a look at some of these issues…
Challenge - Protecting Data

- Small devices are very easy to lose
- Stolen (or lost) enterprise devices that contain sensitive business data, user credentials, or even company private keys could pose a real security risk
- The only way to guard against this is to use strong encryption to protect on-device data
Battery technology lags behind the device technology

A smart mobile device with features like a fast CPU, a large backlit LCD, and multimedia features could drain its battery in a matter of hours which requires daily recharging.

Drained batteries could result in lost data.

One way to cope with this is to synchronize the device periodically with backend data sources.
Data Management

- Needs to be carefully designed depending on what you are doing
- Simple caches the application-managed MIDP RMS stores, plain files, or XML documents are usually adequate
- Sophisticated mobile/enterprise solutions use on-device relational data stores.
- Keeping relational databases synchronized with real-time backend business data from ‘offline’ clients
Dealing with a Slow/Unreliable Network

- Server-based/Thin client apps tend to use the network excessively.
- Support off-line mode when possible to reduce network round trips and improve performance.
  - The key enabling technology is on-device persistence storage cache.
- Frequently device comes in and out of network service (at least in the US!).
Challenge - Optimizing for Many Devices

- Pervasive devices are cheap and easy to carry around, there tends to be many of them in a company
- Each worker could carry multiple interconnected devices
- Enterprise solutions need to support all devices in use in the company
- J2ME provides a device-independent platform to develop applications, but applications still need to be optimized for the specific target UI and other device characteristics
- MVC pattern could ease the pain of customizing applications which means only the view layer needs to be modified
Potentials and Pitfalls of Mobile Technology
IT Potential

- **Business to Employee (B2E)**
  - Reduce operational costs for mobile employees such as sales force, field agents, factory floor workers
  - Combine with CRM and/or Asset management on site

- **Business to Business (B2B)**
  - Improve efficiency in supply chain management where devices can be used to track inventory and shipment data
  - Identify bottlenecks in real-time
  - Field agents can do purchasing, authorization, billing on device
Pitfalls - The Not-So-Obvious

- Pushing out mobile technology could be a technical challenge
- Pushing out mobile technology could be a political challenge
- Need to take the ‘target user’ into consideration and try and involve feedback early on in the development process
- Users treat their devices as ‘personal’ and usually customize them
- Prototypes are a huge help
Mobile/Enterprise Integration Points
Ubiquitous Integration

- Enterprise mobile clients need to integrate with many different backend or middleware systems
- Frequently dealing with different devices, different data input modes, and network circumstances
- Let’s take a look at the various integration technologies and the pros & cons of each
<table>
<thead>
<tr>
<th>Scheme</th>
<th>Interoperability</th>
<th>Coupling</th>
<th>Footprint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binary over HTTP</td>
<td>poor</td>
<td>tight</td>
<td>light</td>
</tr>
<tr>
<td>RPC frameworks</td>
<td>good</td>
<td>tight</td>
<td>light</td>
</tr>
<tr>
<td>Messaging</td>
<td>good</td>
<td>loose</td>
<td>good</td>
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<tr>
<td>XML Web services</td>
<td>excellent</td>
<td>loose</td>
<td>heavy</td>
</tr>
</tbody>
</table>

*Source: Enterprise J2ME – M. Yuan*
Binary Over HTTP

**Pro’s**
- HTTP is mandatory on all J2ME devices, basis for most other approaches
- HTTP can transport text as well as binary content
- Binary protocol can be designed specifically for an application and minimize # of bytes sent over the network

**Con’s**
- Tight coupling between client/server
- Requires matching serializer/deserializer
- If application requires frequent updates, this option is a poor choice
- If we can’t control the server-side components, this option is not feasible
RPC Frameworks

Pro’s
- More standardized approach, commercially available frameworks available.
- Saves time in proprietary interface development
- RPC’s can be designed for optimized bytes over the network

Con’s
- Tight coupling between client/server still remain
- If using a commercial and/or open source framework (like kCommand), you might be relying on it’s easy-of-use
- Auto generated source code can be hard to customize
Messaging

**Pro’s**
- Decouples client and server
- Saves time in proprietary interface development
- Standardized API’s

**Con’s**
- Lack of interoperability with other TCP/IP-based IM systems (however can use Jabber Protocol…)
- Typically already have a message infrastructure in place that needs to be considered
P2P Messaging

- SMS (Short Message Service) is a predominate mode of P2P communication
  - Can also use CBS (cell Broadcast Short Message Service)

- Can be rolled into enterprise notifications and used to launch Mobile applications
  - Sending an SMS to initial sales force daily data uploads
  - Take advantage of J2ME push technology

- Use J2ME WMA (Wireless Messaging API) on both CDC and CLDC platforms
  - Allows for devices to run SMS-based server apps
Email and PIM

- Mail4ME – Open Source library provides lightweight email APIs for all J2ME profiles
  - Receive, send, delete, message parts
  - http://mail4me.objectweb.org/
- JavaPhone PIM API in javax.pim package
  - addressbook
  - calendar
  - userprofile
XML Web Services

Pro’s
- Platform-agnostic interfaces
- Supports both RPC and messaging style integration
- Take advantage of SOAP

Con’s
- Large bandwidth requirements
- CPU intensive on client
- Increases footprint size on the device
When to use kSOAP

- Open source kSOAP project runs on J2SE and J2ME.
  - Built on top of kXML parser
  - Supports most commonly used SOAP features
- Flexibility and a robust feature-set are a high priority
- Program size and memory usage are less important than advanced networking features
- The data being exchanged is complicated, the relationships between the data are complicated, or is it important to define custom data types
Invoking Web Services

- J2ME Web Services Optional Package
  - JSR-172 – wide industry support
  - Supports CLDC 1.0 & 1.1
  - API's standardize remote service invocation and XML parsing - subsets of based on JAX-RPC 1.2 and SAX2

- WTK 2.1, includes the libraries you need to develop MIDlets that take advantage of J2ME WS and also includes a JAX-RPC stub generator

Good article:
http://developers.sun.com/techtopics/mobility/apis/articles/wsa/
Offline data management is key to success of mobile/enterprise applications

- Provide performance cache to reduce network round trips and/or latency

Going past basics in RMS, embedded relational DB functionality can be very powerful

JDBC Optional Package for CDC provides a subset of JDBC 3.0

Various vendors have mobile solutions: Sybase iAnywhere, HSQL DB, IBM DB2 Everyplace, Oracle9i Lite, PointBase Micro DB
Data Synchronization

- Disconnected mobile DB’s must allow for aggregated data to be synched

Synchronization requires:
- Field data to be aggregated at the back end
- Devices to get data updates from back end
- The back end DB to act as a backup repository for the device DB

- Usually requires some type of mobile middleware synchronization server
Specify which backend tables are published to which users
- Allows for filters and conflict resolution logic

Uses JDBC or proprietary protocols to take advantage of DB-specific features and optimizations

Mobile DB connect to these servers using a proprietary protocol
Mobile Security Concerns

- Security is critical in enterprise/mobile apps
- Data confidentiality – point-to-point using secure channels
  - HTTPS, SSL (Secure Socket Layer), TLS (Transaction Layer Security)
- Access control against possibly multiple backend systems
  - Pain for mobile users to have to sign on multiple times
  - Single sign-on server sometimes used to provide ticket
- Device security
  - The responsibility is lies with the user to enforce strong password-based encryption
Types of Mobile/Enterprise Applications
Types of Services

- Information services (give me list of nearby hotels)
- Functional services (order a taxi)
- Location-aware services (push type of services, coupons & advertising)
- Searching services (transportation information)
- Tracking services (people, objects)
Example Mobile Services

- Location Sensitive Billing
- Automated Advertising
- Automated Announcements
- Fleet Management
- Asset Tracking
- In-Field Data Reporting
- Traffic Reports
- Weather Reports
- Navigational Info
- Location Tracking
What is LBS?

Location Based Services (LBS) can be described as "applications which react according to a geographic trigger".

Examples of geographic triggers might be:

- Input of a Town name
- Zip code or Street
- Position of a mobile phone user
- Tracking position of your car as you are driving home from the office.
Components of LBS

- GeoCoding – taking a text address and converting it to lat/long coordinates
- GIS (Geographic Information System) – stores geospatial data for manipulation, storing, printing, and creating of map content
- Map content - Can either be in Raster or Vector format.
  - Raster images are pre-rendered pictures (such as aerial photographs)
  - Vector data is a series of matching layers, each layer contains a specific type of information (a layer for parks, motorways, streets, rivers etc).
  - Both formats can be used to display maps onto a screen.
Components of LBS

- **Proximity searching** - method of finding "relevant" information to meet the users specific request.
  - "find everything within a radius of…", "select everything I will drive past in the next hour" or "show me where I am"

- **Routing and/or Driving Directions**: The interaction between the users location (origin) and a planned destination.

- **Rendering**: The production of maps for display onto the screen of a device. Rendered images are typically personalized according to the specific LBS request.
Assisted-GPS (A-GPS)

1. Handset broadcast request to towers
2. Location server tells handset which satellite to listen to
3. Handset listens to GPS satellite
4. Positional information combined with ranging information are sent back to the Location server
5. Location server calculates the actual position and returns the coordinates to the handset, or application server
Solution Architecture

J2ME MIDlet on devices takes advantage of embedded GPS

Middleware Components

GIS/Mapping Services

HTTP

Thin and Fat Clients
Using XML with LBS

- kXML to/from server
- Need for open and scalable architecture for GIS in order to incorporate new types of information sources and new types of functions
- XML deals primarily with logical structure and can be core technology for GIS
- XML is platform independent therefore allows organization of interaction among any platforms and systems Geographical view
Wrap-up

- Mobile/Enterprise integration is on the verge of huge growth
- We must look at our existing applications and possibly refactor them to use an appropriate mix of technologies on pervasive devices
- J2ME is ready, willing, and able to execute these applications
- The potential for pushing enterprise apps out onto the pervasive devices is both exciting, cost efficient and profitable
Tak!
Feel free to contact me at ...
sspielman@switchbacksoftware.com
with any questions and/or further information on J2ME/J2EE contracting services
I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

5/18/2017
Date

Susan Spielman