UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAP AMERICA, INC.,
Petitioner,

v.

CYANDIA, INC.,
Patent Owner.

IPR2024-01432
U.S. Patent No. 8,751,948
Issued: June 10, 2014
Application No. 13/086,165
Filed: April 13, 2011

Title: METHODS, APPARATUS, AND SYSTEMS FOR PROVIDING AND MONITORING SECURE INFORMATION VIA MULTIPLE AUTHORIZED CHANNELS AND GENERATING ALERTS RELATING TO SAME

PETITION FOR
***INTER PARTES* REVIEW OF U.S. PATENT NO. 8,751,948**

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LIST OF EXHIBITS

No.	Description
1001	U.S. Patent No. 8,751,948 ("**'948 Patent**")
1002	File History of U.S. Patent No. 8,751,948
1003	Declaration of Christopher Schmandt, dated September 20, 2024 ("**Schmandt Decl.**")
1004	*IBM Rational Application Developer V6 Portlet Application Development and Portal Tools* (August 2005) ("**WebSphere-Portal**")
1005	Ron Ben-Natan et al., *Mastering IBM WebSphere Portal* (2004) ("**Ben-Natan**")
1006	*IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume I: Installation and Administration* (May 2005) ("**WebSphere-Everyplace-1**")
1007	*IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume II: Application Development* (March 2005) ("**WebSphere-Everyplace-2**")
1008	*IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume III: E-Mail and Database Synchronization* (April 2005) ("**WebSphere-Everyplace-3**")
1009	*IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume IV: Advanced Topics* (March 2005) ("**WebSphere-Everyplace-4**")
1010	U.S. Patent Application Publication No. 2004/0044736 to Austin-Lane et al. ("**Austin-Lane**")
1011	N/A
1012	N/A
1013	N/A
1014	N/A
1015	U.S. Patent No. 7,376,907 to Santoro et al. ("**Santoro**")

No.	Description
1016	N/A
1017	*Microsoft Computer Dictionary* (5th Ed.) (excerpts) (2002)
1018	U.S. Patent No. 5,548,692 ("**Cok**")
1019	*Microsoft Internet Explorer ResourceKit*, Microsoft (1998)
1020	U.S. Patent Application Publication No. 2007/0174782 ("**Russo**")
1021	David Pogue, *iPhone The Missing Manual* (excerpts) (2007)
1022	David Pogue, *Mac OS X Leopard The Missing Manual* (excerpts) (2007)
1023	Harry Newton, *Newton's Telecom Dictionary* (20th Ed.) (excerpts) (2004)
1024	N/A
1025	Affidavit of Nathaniel Frank-White, Records Request Processor at the Internet Archive
1026	N/A
1027	N/A
1028	Copyright Office Public Catalog: detailed record catalog entry for *IBM Rational Application Developer V6, Portlet Application Development and Portal Tools*, 1st ed., Registration Number/Date: TX0006234319 / 2005-09-13
1029	Library of Congress Catalog: detailed record catalog entry for *IBM Rational Application Developer V6, Portlet Application Development and Portal Tool*s, LCCN number: 2005284159
1030	Copyright Office Public Catalog: detailed record catalog entry for *Mastering IBM WebSphere Portal* (2004), Registration Number/Date: TX0006003513 / 2004-08-02
1031	Library of Congress Catalog: detailed record catalog entry for *Mastering IBM WebSphere Portal* (2004), LCCN number: 2004274459
1032	Copyright Office Public Catalog: detailed record catalog entry for *IBM WebSphere Everyplace Access V5 Handbook for Developers*

No.	Description
	and Administrators Volume I: Installation and Administration (May 2005), Registration Number/Date: TX0006244913 / 2005-08-12
1033	Library of Congress Catalog: detailed record catalog entry for *IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators* Volumes I-IV, LCCN number: 2005280318
1034	Copyright Office Public Catalog: detailed record catalog entry for *IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume II: Application Development* (March 2005), Registration Number/Date: TX0006170514 / 2005-05-20
1035	Copyright Office Public Catalog: detailed record catalog entry for *IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume III: E-Mail and Database Synchronization* (April 2005), Registration Number/Date: TX0006169440 / 2005-06-17
1036	Copyright Office Public Catalog: detailed record catalog entry for *IBM WebSphere Everyplace Access V5 Handbook for Developers and Administrators Volume IV: Advanced Topics* (March 2005), Registration Number/Date: TX0006170517 / 2005-05-20
1037	U.S. Patent Application Publication No. 2007/0283020 to Chowdary et al.
1038	U.S. Patent Application Publication No. 2007/0033251 to Mandalia et al.
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1041	WSRP standard 2.0 specification
1042	U.S. Patent Application Publication No. 2005/0159823

MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

1. Real Party-In-Interest

The real-parties-in-interest are SAP America, Inc. and SAP SE.

2. Related Matters

The ’948 Patent (EX1001) has been asserted in the following litigations:

- *Cyandia, Inc. v. SAP America, Inc. et al*, Case No. 2-24-cv-00096 (E.D. Tex.), filed February 12, 2024 (the “district court case”).

3. Lead And Back-Up Counsel, And Service Information

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Petitioner consents to service via email at the above email addresses and the email address of SAP_Cyandia_IPRs@klarquist.com.

Pursuant to 37 C.F.R. § 42.10(b), concurrently filed with this Petition is a Power of Attorney executed by Petitioner and appointing the above counsel.

Petitioner authorizes Account No. 02-4550 to be charged for any fees, including those enumerated in 37 C.F.R. § 42.15.

SAP America, Inc. ("Petitioner") respectfully requests *inter partes* review ("IPR") of the claims currently asserted in the district court case (claims 1-7, 10, 11, 13, 18, 19, 23, 29, 35, and 36) (the "challenged claims") of U.S. Patent No. 8,751,948 ("the '948 patent") (EX1001), allegedly assigned to Cyandia, Inc. ("Patent Owner"), with a security interest assigned to HPCF Litigation Finance US I LLC. For the reasons set forth below, these claims should be found unpatentable and cancelled.

I. INTRODUCTION

Though long, the challenged claims boil down to two concepts well-known in the prior art: (1) implementing a matrix of "channels," through which the user receives and/or interacts with secure information, and (2) providing an alert on a device on which a user has an active session. The prior art IBM WebSphere references (EXS1004-1009) ("WebSphere references") describe providing secure information to a user within a grid of portlets (channels) and allowing a user to register for the same kind of alerts described by the '948 patent, including an alert for a stock price reaching a user-set threshold. These references also disclose managing a user's session, as was well known in the art. Although the WebSphere references do not expressly disclose determining how to notify the user based on the user's session information, Austin-Lane (EX1010) discloses this concept, and, specifically, sending an alert to the device that the user is currently using to ensure

the user receives the alert promptly. Thus, the WebSphere references and Austin-Lane render each challenged claim obvious.

II. GROUNDS FOR STANDING PER 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’948 patent is available for IPR and that Petitioner is not barred or estopped from requesting an IPR challenging the patent claims on the ground identified in this petition.

III. IDENTIFICATION OF CHALLENGE

A. Statement Of The Precise Relief Requested / Statutory Ground

Petitioner requests *inter partes* review of claims 1-7, 10-11, 13, 18-19, 23, 29, and 35-36 (the “challenged claims”) of the ’948 Patent, on the following statutory ground:

Ground	Reference(s)	Basis	Claims
1	The WebSphere references[1] (EXS1004-09) and Austin-Lane (EX1010)	35 U.S.C. § 103	1-7, 10-11, 13, 18-19, 23, 29, and 35-36

[1] WebSphere-Portal (EX1004), Ben-Natan (EX1005) and WebSphere-Everyplace (WebSphere-Everyplace-1 (EX1006), WebSphere-Everyplace-2 (EX1007), WebSphere-Everyplace-3 (EX1008), and WebSphere-Everyplace-4 (EX1009)).

B. Denial Under § 325(d) Is Improper

None of the prior art references relied on herein were cited or substantively addressed on the record during prosecution, and nothing suggests that their teachings relied on herein—much less the combination of those teachings as informed by a POSITA's knowledge and expert testimony—were considered by the Examiner. *See*, *e.g*., *Mylan Pharm. Inc*., *v*. *Regeneron Pharm*., *Inc*., IPR2022-01226, Paper 22 at 27-29 (PTAB Jan. 11, 2023). Accordingly, this petition should not be denied under Section 325(d).

C. *Fintiv* Denial Is Improper

The Board should not discretionarily deny institution under *Fintiv* because the district court case is still in its early stages (only infringement and invalidity contentions have been exchanged). And even though a trial date is currently set for before the 18-month final written decision (FWD) deadline, that trial date may be postponed at least because: (1) Petitioner is filing four IPRs on three of the four asserted patents and plans to file a motion to stay in the district court, and (2) there is a pending motion and a cross-motion to transfer the case. Moreover, Petitioner prepared and filed these petitions promptly, roughly four months after having received the infringement contentions on May 15, 2024. This petition also presents compelling merits, as explained in Section VII.

IV. LEVEL OF SKILL IN THE ART, AND STATE OF THE ART

A. Person Of Ordinary Skill In The Art

A person of ordinary skill in the art for purposes of the '948 patent in May 2008 ("POSITA") would have had a bachelor's degree in electrical engineering, computer science, or equivalent, with two or more years of experience developing and implementing graphical user interfaces for controlling server-based applications, including handling asynchronous notifications generated by those applications and web services, such as portal systems, or an equivalent amount of relevant work or research experience. A POSITA would have been familiar with common approaches for presenting information on a graphical user interface, including various layouts for presenting multiple elements, such as icons, widgets, windows, etc. *E.g.*, EX1004, 2-4; EX1006, 34, 390; EX1015, 7:31-43, FIG. 1; EX1018, 1:15-19, 3:35-40, FIG. 1; EX1019, xxx, 183; EX1021, 5, EX1022, 22. EX1003, ¶33.

Further, a POSITA would have been familiar with communication protocols and markup languages commonly used for transmitting information (including notification data) between a server and a user's device(s), such as HTTP, SMS, SMTP, HTML, XML, and RFC822 email headers. Similarly, a POSITA would have understood and/or used Java technologies, XML applications, and Web publishing, along with protocols and techniques for managing and interfacing to remote web objects, such as Web Services for Remote Portlets (WSRP). EX1004, xix, 12, 899;

EX1010, [0004-5], [0031], [0033], [0048]; EX1023, 402, 702, 760, 933-934; EX1040 (WSRP 1.0), EX1041 (WSRP 2.0). EX1003, ¶34.

POSITAs commonly used SSO and/or other authentication processes to verify the identity of the user and their device, to protect the user's privacy. EX1004, 5, 11, 15-16, 630, 638-639, 899-900; EX1005, 15, 365-401; EX1006, 5; EX1007, 182-183; EX1009, 327-360; EX1017, 42-43, 299, 310, 483, 495, 580; EX1023, 752. POSITAs would have understood how to implement a server with an authentication directory (e.g., LDAP) including a plurality of user, device, and application accounts. *Id*. A POSITA also would have been familiar with techniques to manage users' sessions, for example, to track the lifetime of a given sign-on. EX1004, 134-139, 285; EX1005, 18-19, 164, 228, 233-234, 264, 480-482; EX1006, 28-29, 381-384; EX1010, [0035]. It also was common practice to encrypt communications between a server and a user's device(s) to prevent unauthorized entities from gaining access to the information, thus protecting the user's privacy. EX1004, 11, 630, 899-900; EX1005, 5, 380-383; EX1006, 315-337; EX1017, 495; EX1023, 777. A POSITA also would have been familiar with protocols commonly used to authenticate users (e.g., single sign-on or SSO) and encrypt communications (e.g., SSL). *Id*. EX1003, ¶35.

B. State Of The Art

The knowledge and skill of a POSITA encompassed the following claim-recited features, as reflected in both background references and the references that form the ground of unpatentability presented in Section VII. EX1003, ¶36.

1. Displaying Secure User-Centric Channels (e.g., Icons Representing Computer Applications) In A Grid

It was well known in the art to display icons, or other graphical representations of user-centric information (e.g., applications or files that provide users with access to information) (*see infra* Section VI.A.1), in a grid. For example, a 1996 patent publication showed a matrix of "icons" (32):

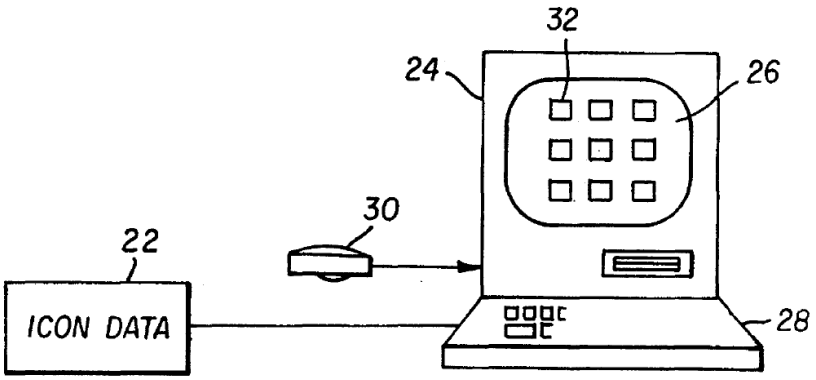


FIG. 1

EX1018, FIG. 1; *see also id.*, 1:15-19, 3:35-40; EX1020, Abstract, FIGS. 4A-4B. And a 2004 publication showed a matrix of different information sources (channels), including stock information, folders, news, and website information:

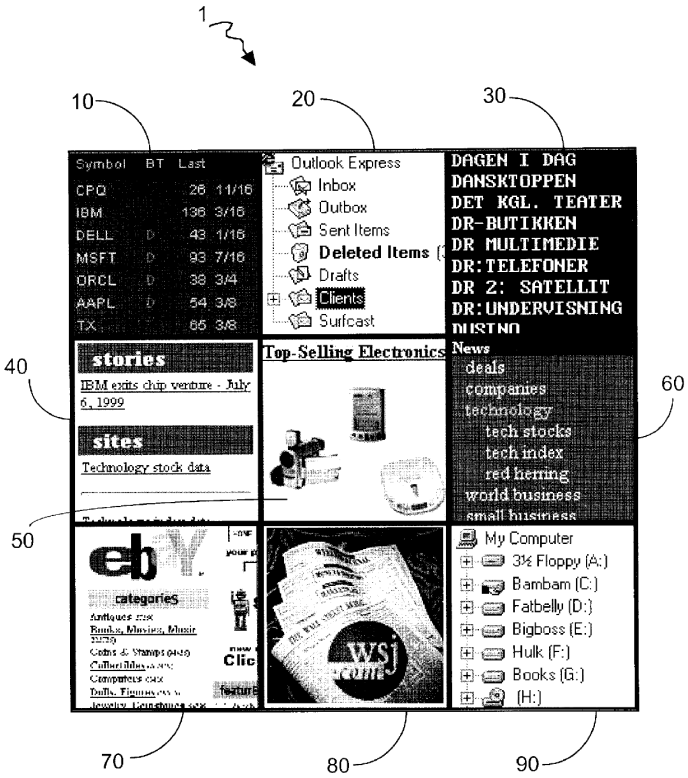


Fig. 1

EX1015, FIG. 1; *see also id*., 7:31-43; EX1019, xxx (showing tiles displayed by Active Desktop), 183. Some further examples follow:

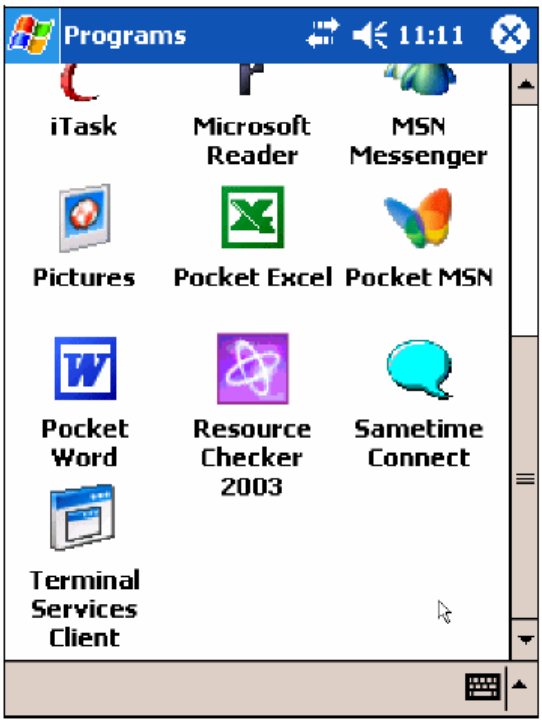


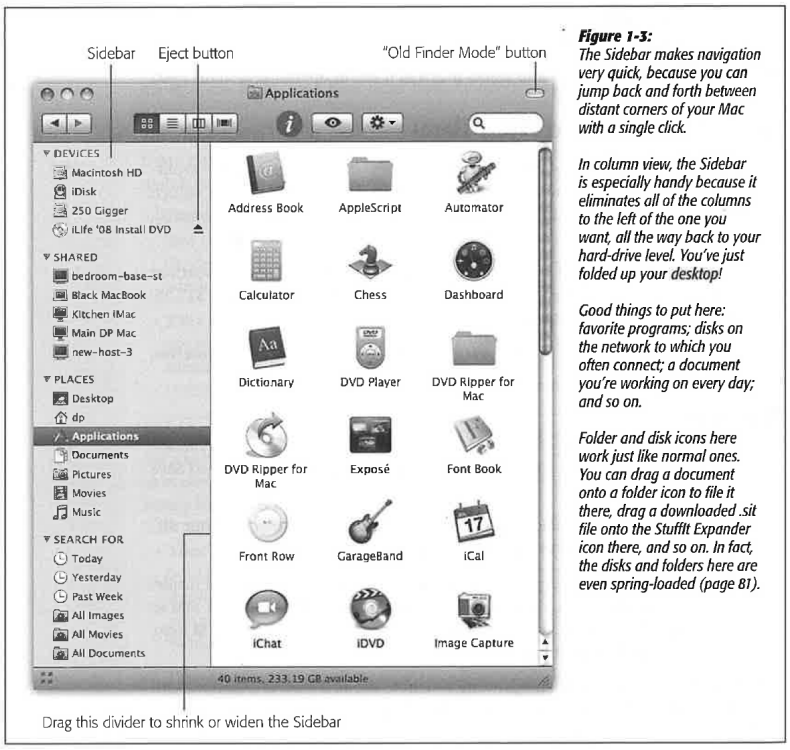
Figure 11-4 Running the tool

EX1006, 390.

Figure 2-7 Microsoft Exchange PIM portlets

EX1006, 34.

EX1021, 5.



EX1022, 22. EX1003, ¶¶37-39.

It was also well known to use security protocols such as secure socket layer (SSL) and Simple Authentication and Security Layer (SASL) to securely provide information to users (e.g., via encryption). EX1004, 11, 630, 899-900; EX1005, 5, 380-383; EX1006, 315-337; EX1017, 495; EX1023, 777. EX1003, ¶40.

2. Authenticating A User And/Or A Platform Associated With A User

Long prior to the challenged claims' earliest possible effective filing date, it was common practice to authenticate users (e.g., via username and password) and/or platforms/devices associated with users to prevent unauthorized access of private or

sensitive information. *E.g.*, EX1004, 5, 7, 11, 14-16, 27, 33, 119, 380, 630-631, 899-900; EX1005, xvii, xxix, 17, 21, 242, 256, 270, 365-401, 483-486; EX1006, 5, 182-183, 250-254, 340-341; EX1007, 240, 320-322; EX1008, 144; EX1009, 3, 9-10, 19-20, 302; EX1024, [0032], [0041]. EX1003, ¶41.

Moreover, it was well known to authenticate users, user's devices, and/or applications, including as part of a single sign-on (SSO) process, using lightweight directory access protocol (LDAP), tokens (e.g., LTPA tokens), and/or certificates. EX1004, 5, 11, 15-16, 630, 638-639, 899-900; EX1005, 15, 365-401; EX1006, 5; EX1007, 182-183; EX1009, 327-360; EX1017, 42-43, 299, 310, 483, 495, 580; EX1023, 752, 932. EX1003, ¶42.

3. <u>Communication Protocols And Markup Languages</u>

Communication protocols and markup languages such as HTTP, SMS, SMTP, HTML, XML, and RFC822, were well known before the alleged priority date of the '948 patent. EX1004, xix; EX1010, [0004-5], [0031], [0033], [0048]; EX1023, 402, 702, 760, 933-934. For example, in 2002, Austin-Lane described XML and HTML as "standard" (EX1010, [0031]), and described how existing systems used, *inter alia*, email, SMS, and TCP/IP communication protocols to deliver electronic content and messages (EX1010, [0004]). EX1003, ¶43.

V. THE '948 PATENT

The '948 patent, issued from U.S. Patent Application No. 13/086,165, a continuation-in-part of U.S. Patent Application No. 12/465,331, filed on May 13, 2009, which claims priority to U.S. Provisional Patent Application No. 61/052,765, filed on May 13, 2008. While Petitioner does not challenge the priority date in this petition, Petitioner does so in a contemporaneously-filed petition (IPR2024-01433).

A. The '948 Patent's Specification

The '948 patent describes some aspects of a channel grid framework on a computing device for accessing and interacting with content. *E.g.*, EX1001, Abstract. After a user signs into their account via a single/universal sign-on procedure (*e.g.*, *id.*, 15:57-16:10, 24:63-25:19), the user's computing device presents the user with a grid of tiles/icons ("touchlets") (*e.g.*, *id.*, 11:36-58, 12:1-11) that provide access to channels (e.g., applications) of user-centric content from a variety of sources, such as "secure email services," "secure banking and/or financial accounts," and "secure web-services accounts" (*id.*, 15:66-16:1). *Id.*, Abstract, 5:50-53, 6:47-59, 11:4-12:52, 18:26-45, 21:37-42, 23:64-24:3.

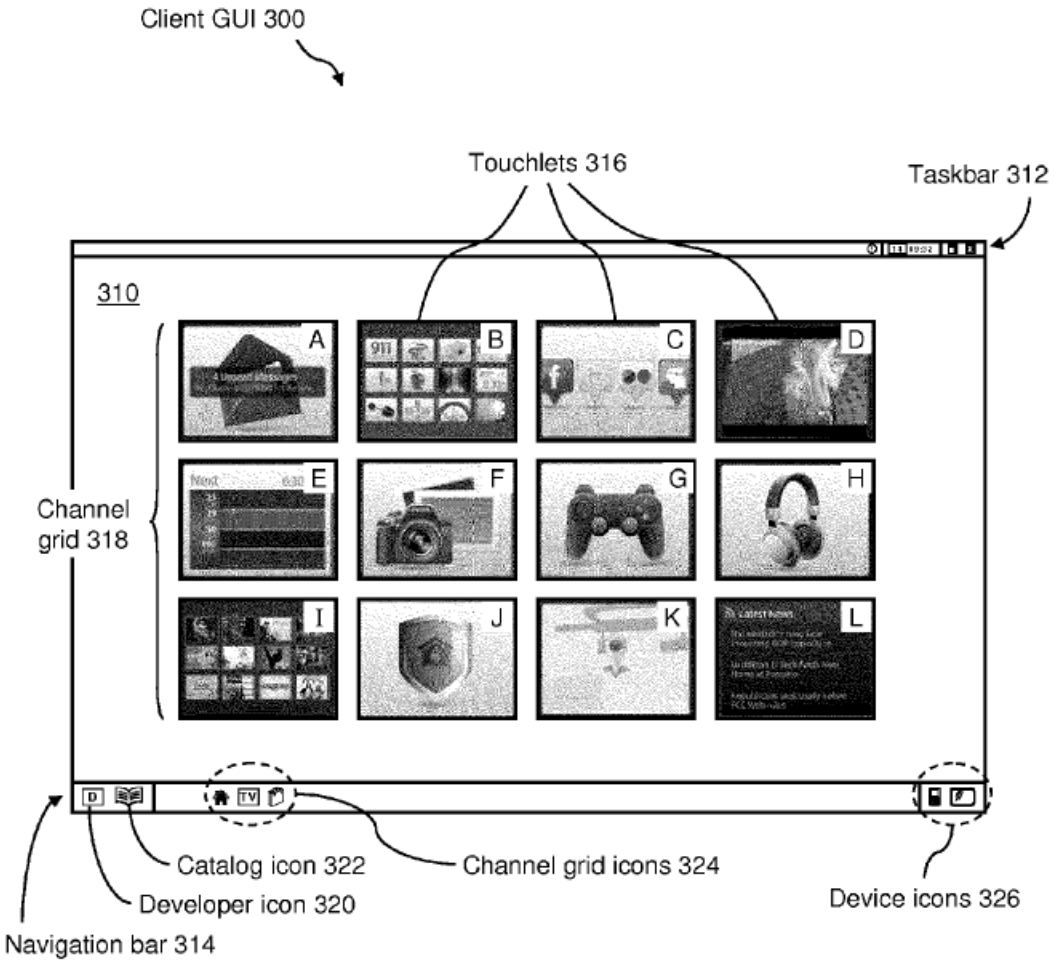
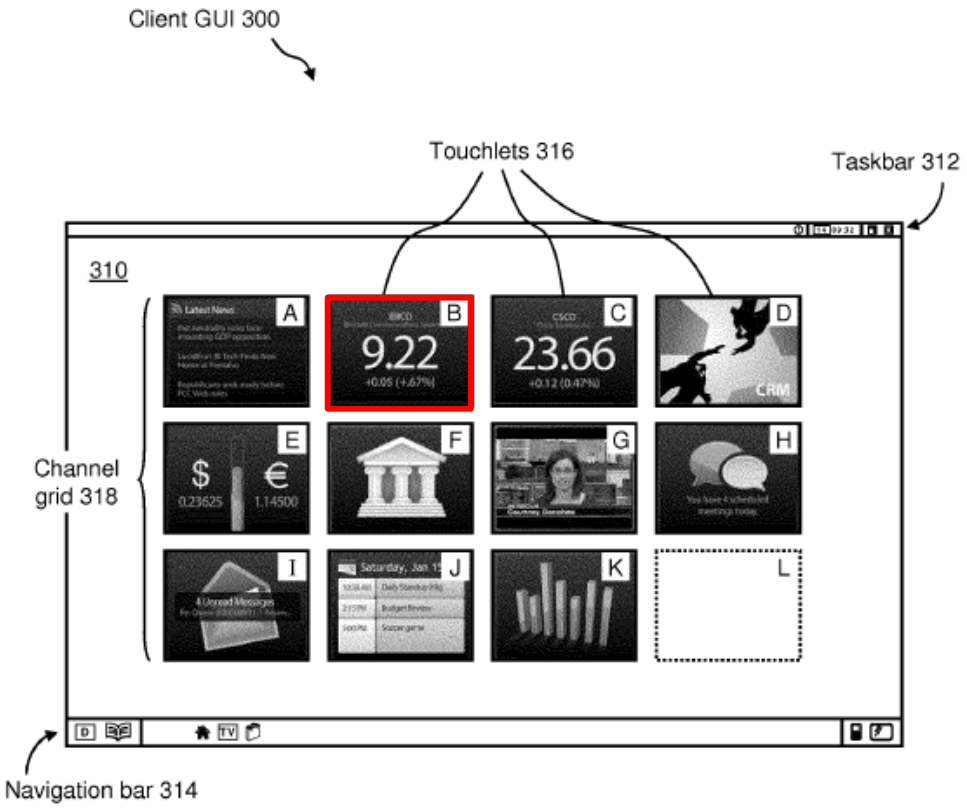


FIG. 3

EX1001, FIG. 3.

The ’948 patent also describes how a user can elect to be notified when a pre-defined event/condition occurs. As one example, a user can set up a stock price alert. EX1001, 25:20-26:3, FIGS. 14-17. The user, for example, “sets up an alert to occur when the share price is ‘less than’ $9.23.” EX1001, 25:47-48. If the price drops below $9.23, the ‘“Stock Watch’ touchlet 316B may display an alert state to the user”

by "chang[ing] the color of the border of the 'Stock Watch' touchlet 316B to red." *Id*., 25:67-26:3.



Id., FIG. 17 (red annotation added showing touchlet 316B in alert state).

The '948 patent also explains that a notification manager determines the best notification method based on session information indicating whether, and on which device(s), the user has an active session. EX1001, 6:50-56, 15:4-13, 20:60-21:36, 23:20-63, 27:37-54. For example, if the user "has an active session on his/her laptop computer … it is determined that the best alert notification method is via the laptop computer," "the alert is transmitted to the laptop computer," and the "channel …

displays the alert to the user" within the channel application. *Id*., 21:11-30, 23:39-59; *see also id*., 6:54-56; 21:2-5, 23:28-31.

B. The Prosecution History

The '948 application was filed on April 13, 2013 (EX1002, 75-84[2] (claims)), and was allowed on January 30, 2014, after one Office action in which the claims were rejected under Sections 102 and 103 over Flynt (U.S. 2007/0082707) and other references (EX1002, 271-287, 304-315, 332-350).

C. Claims Listing

EX1039 includes a complete listing of the challenged claims.

VI. CLAIM CONSTRUCTION

Unless otherwise noted, Petitioner applies the plain and ordinary meaning of all claim terms below. 83 Fed. Reg. 51340; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-1313 (Fed. Cir. 2005) (*en banc*). Petitioner does not, however, waive any argument in any litigation that claim terms in the '948 patent are indefinite or otherwise invalid nor does Petitioner waive its right to raise additional issues of claim construction in any litigation.

[2] EX1002 citations are to page numbering added by Petitioner.

A. Proposed Constructions

1. "Channel"

"Channel" (throughout the '948 patent claims) should be construed at least in part as: "*a mechanism for providing the user access to and interaction with the user-centric information, comprising a visual component presented on the at least one user platform and an information delivery component on a server*." *See*, *e.g.*, EX1001, 8:60-9:61. The '948 patent states that the channel is a "mechanism … for providing the user access to and interaction with … information" and that it comprises "two pieces (1) a visualization piece that is presented on the client device (e.g., user devices 118) and (2) the integration piece residing at the server (e.g., application server 110)." EX1001, 8:60-9:3; *see also id*., 9:12-39, 9:57-61, 11:36-44, 12:1-4. The visual component on the user device may be "a touchlet," which may be, for example, "an icon to launch its associated channel application 214 to full screen mode." EX1001, 12:1-4. The integration piece residing at the server comprises one or more service components that "retrieve the information 122 from the authorized information source(s) 114 and securely provide the retrieved information 122 to any visual components 210 of a channel 200 for display to [a] user." EX1001, 10:2-5.

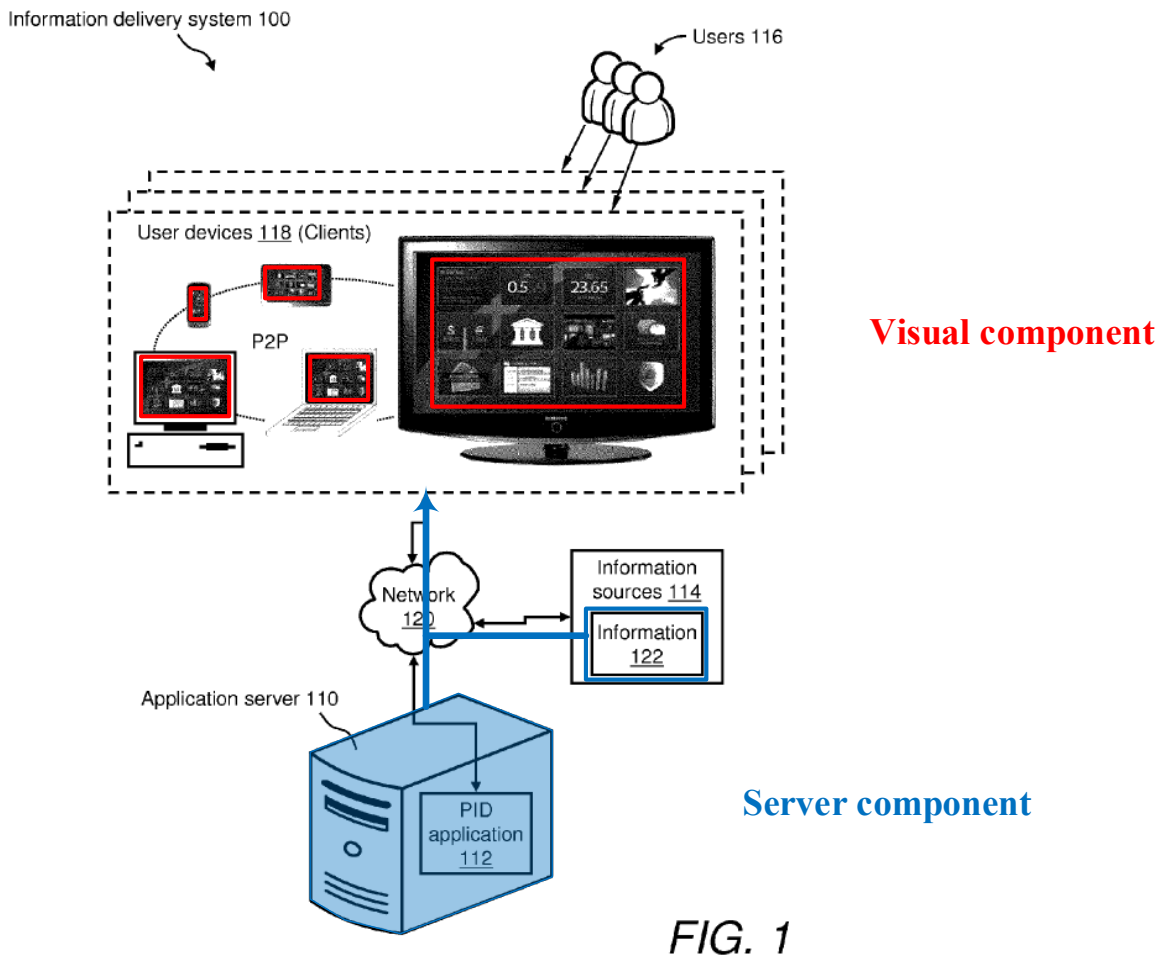


FIG. 1

EX1001, FIG. 1 (red and blue annotations added). EX1003, ¶¶46-47.

Thus, the channel's server-side integration component and user-side visual component together "provid[e] the user access to and interaction with, for example, information 122 and/or any other information." EX1001, 8:60-62. EX1003, ¶48.

VII. GROUND 1: THE CHALLENGED CLAIMS ARE OBVIOUS OVER THE WEBSPHERE REFERENCES IN VIEW OF AUSTIN-LANE

As explained below, the challenged claims are obvious over the WebSphere references (EXS1004-1009) in view of Austin-Lane (EX1010) (the

WebSphere+Austin-Lane combination). The WebSphere references disclose or suggest every element of the challenged claims except the independent claims' determining a notification method by which to provide at least one alert on the at least one external device based on the current state of the at least one external device indicated by the session data. Austin-Lane, however, discloses or suggests this claim element and explains its benefit: determining to send the alert to the device the user is currently using (as indicated by session data) ensures the user receives the alert promptly. *E.g.*, EX1010, [0006-9], [0019], [0021], [0023-24], [0027], [0029], [0031], [0035], [0039], [0041], [0045-46] [0055], [0079]. Thus, as explained in greater detail below, a POSITA would have been motivated with a reasonable expectation of success to start with the WebSphere references' disclosed system (the "WebSphere system") and incorporate Austin-Lane's teachings to determine a notification method based on session data to ensure prompt delivery of the alert to the user. EX1003, ¶49.

A. <u>The WebSphere References</u>

The WebSphere references—WebSphere-Portal (EX1004), Ben-Natan (EX1005), and WebSphere-Everyplace (EXS1006-1009)—are books describing aspects of the same IBM system: WebSphere. *E.g.*, EX1004, (a); EX1005, xxvi, 4; EX1006, (a); EX1007, (a); EX1008, (a); EX1009, (a). They primarily explain how to design, develop, and implement WebSphere Portal, an aspect of the WebSphere

system that allows users to access information from a plurality of sources on a single user interface (a Portal Page). EX1004, xix, 4-51; EX1005, xxvi-xxx, 3-4, 7-12, 276, 473-480; EX1006, xi, 5-6, 25. Ben-Natan and WebSphere-Everyplace also describe another aspect of the WebSphere system, Everyplace Access (aka "WEA"), which "extend[s] [P]ortal functionality to mobile devices," allowing users to leverage Portal functionality from virtually everywhere, hence the name "Everyplace." EX1005, 479; *see also id*., 473-476, 480; EX1006, 1-5, 25, 27-29.

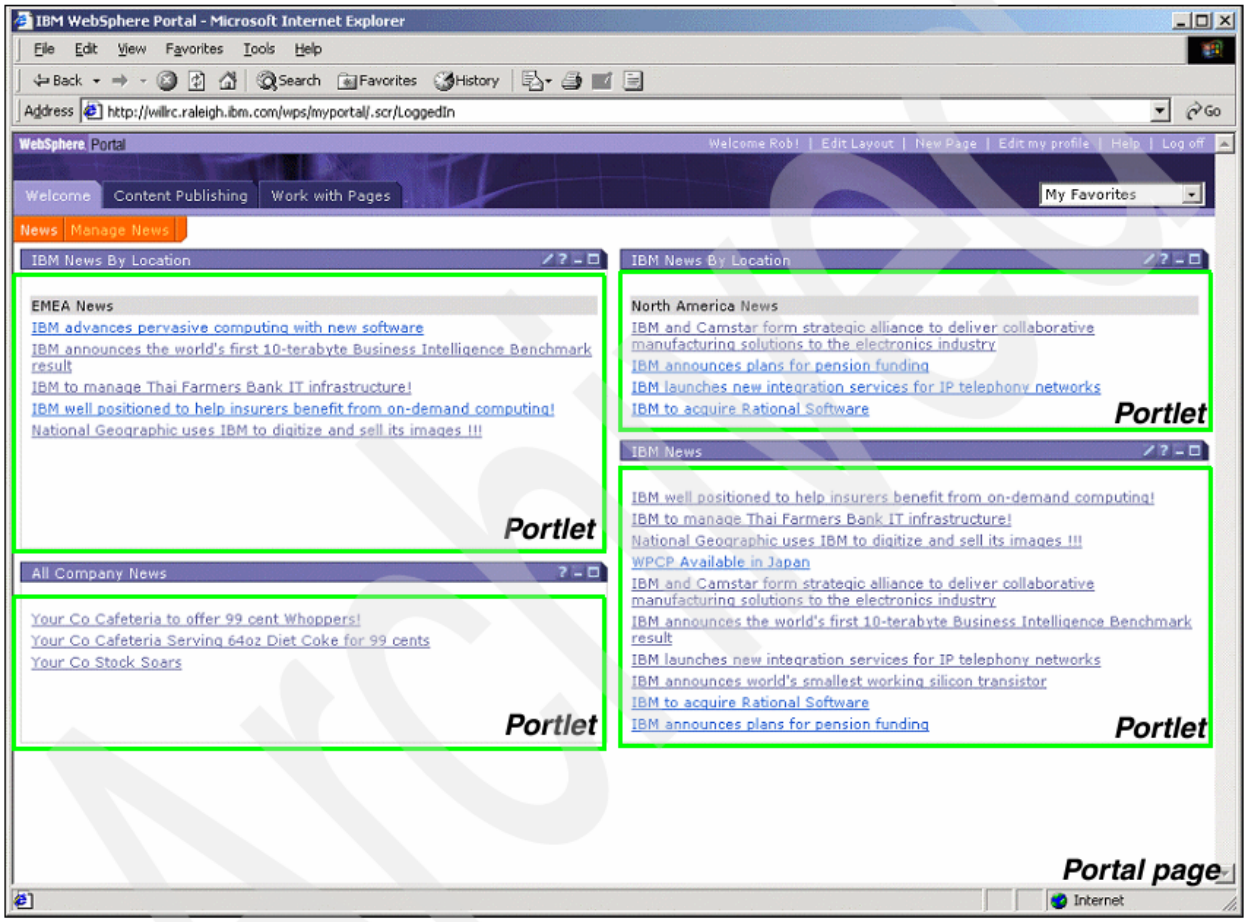


Figure 2-1 Portal page and portlets

EX1004, 49 (showing a Portal Page comprising a plurality of portlets, each of the portlets containing links to additional information).

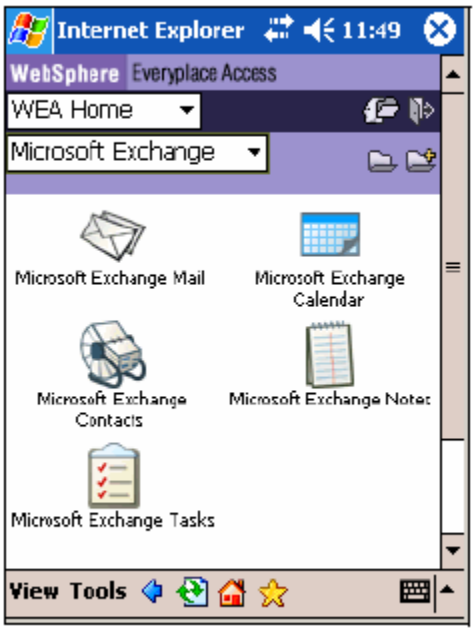


Figure 2-7 Microsoft Exchange PIM portlets

EX1006, 34 (showing a Portal Page displayed on a mobile device comprising portlets for accessing various Microsoft Exchange applications). EX1003, ¶¶50-51.

To access their account from one of their devices, the user first logs in with a username and password, such as using a single sign-on (SSO) process. *E.g.*, EX1004, 5, 7, 11, 27, 33, 51, 76, 134-137, 630, 642; EX1005, 15, 195-196, 225-226, 270, 382-401; EX1006, 5, 30-33, 311, 378; EX1007, 28, 182-187, 320-322, 332, 342; EX1008, 70, 162, 182-184; EX1009, 289-290, 314, 324-355.

Figure 21-16 Running Edit mode of the portlet

EX1004, 665.

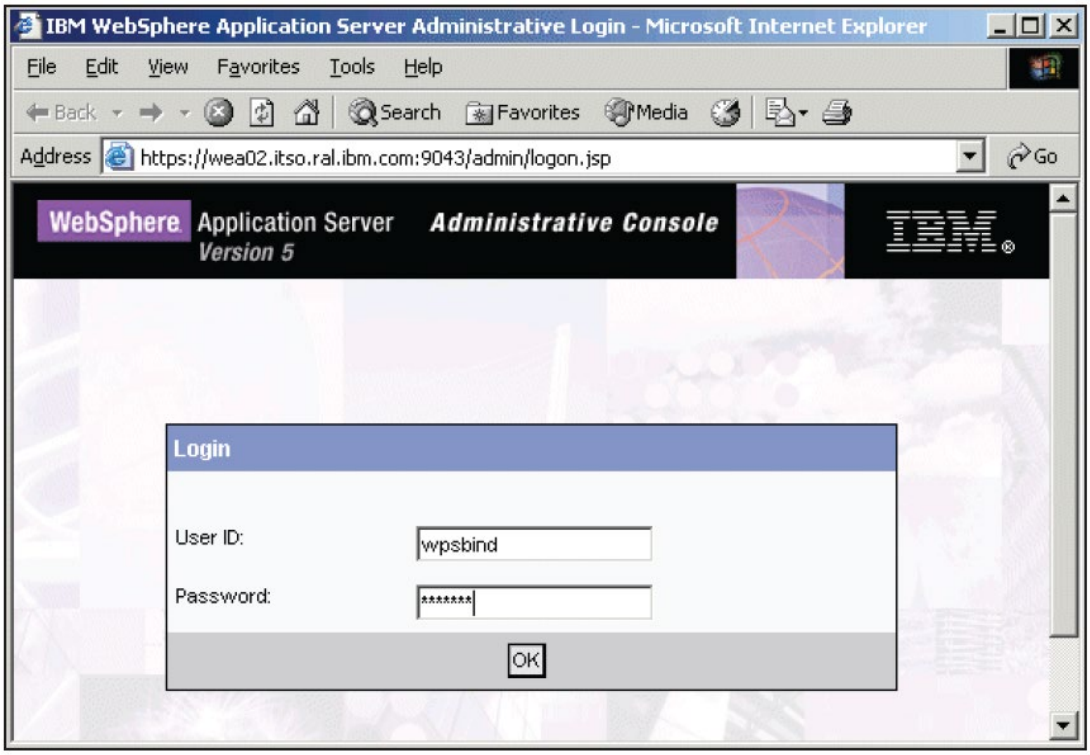


Figure 10-16 WebSphere Everyplace Access Login

EX1009, 347.

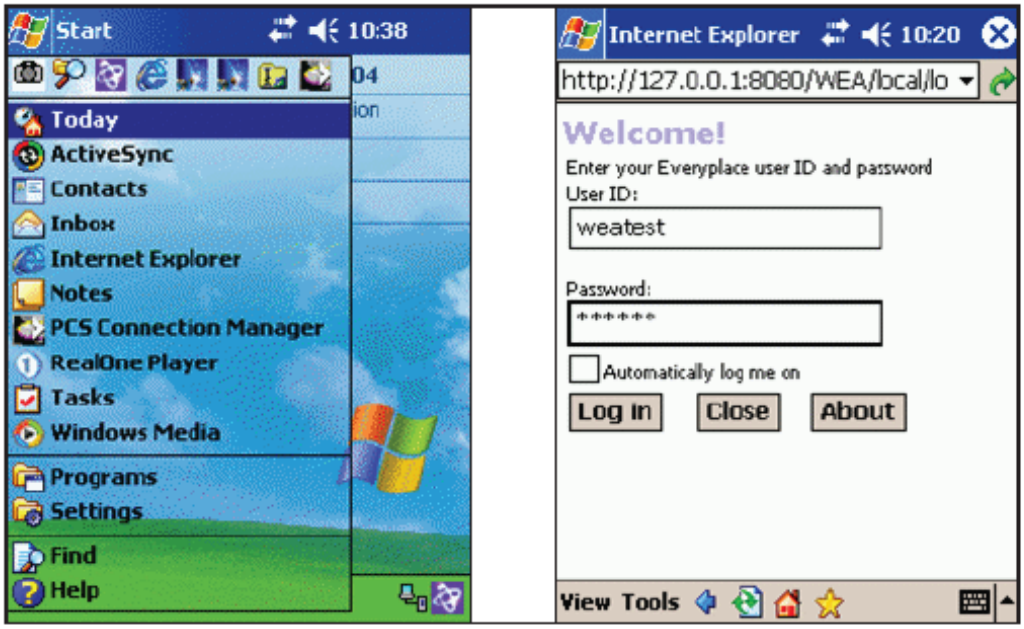


Figure 10-19 Login to WebSphere Everyplace Access

EX1007, 321. EX1003, ¶52.

Once logged into their account, the user is presented with a grid of portlets. *E.g.*, EX1004, 28-29, 49, 60; EX1006, 30, 34; EX1008, 66-67, 182.

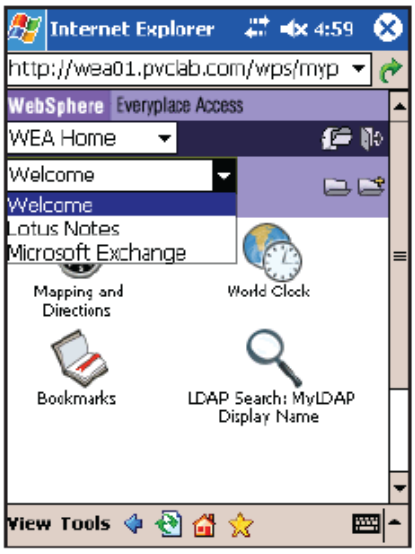


Figure 2-74 Welcome page (after login)

EX1008, 182. EX1003, ¶53.

The user can customize their profile, including modifying the layout and theme of their Portal Page(s). *E.g.*, EX1004, 18-20, 30, 58-64, 95, 247, 935-989, 1000; EX1005, 143-177; EX1006, 41-67. EX1003, ¶54.

Just like the '948 patent, WebSphere-Everyplace describes how a user can set up custom alerts. EX1006, 9-11; EX1009, 1-50, 80-82. WebSphere-Everyplace even describes the same kind of alert as the '948 patent—a stock price alert. EX1001, 25:20-26:3, FIGS. 14-17; EX1006, 9-11; EX1009, 1-10, 19-25, 29-33, 40-50, 80-82.

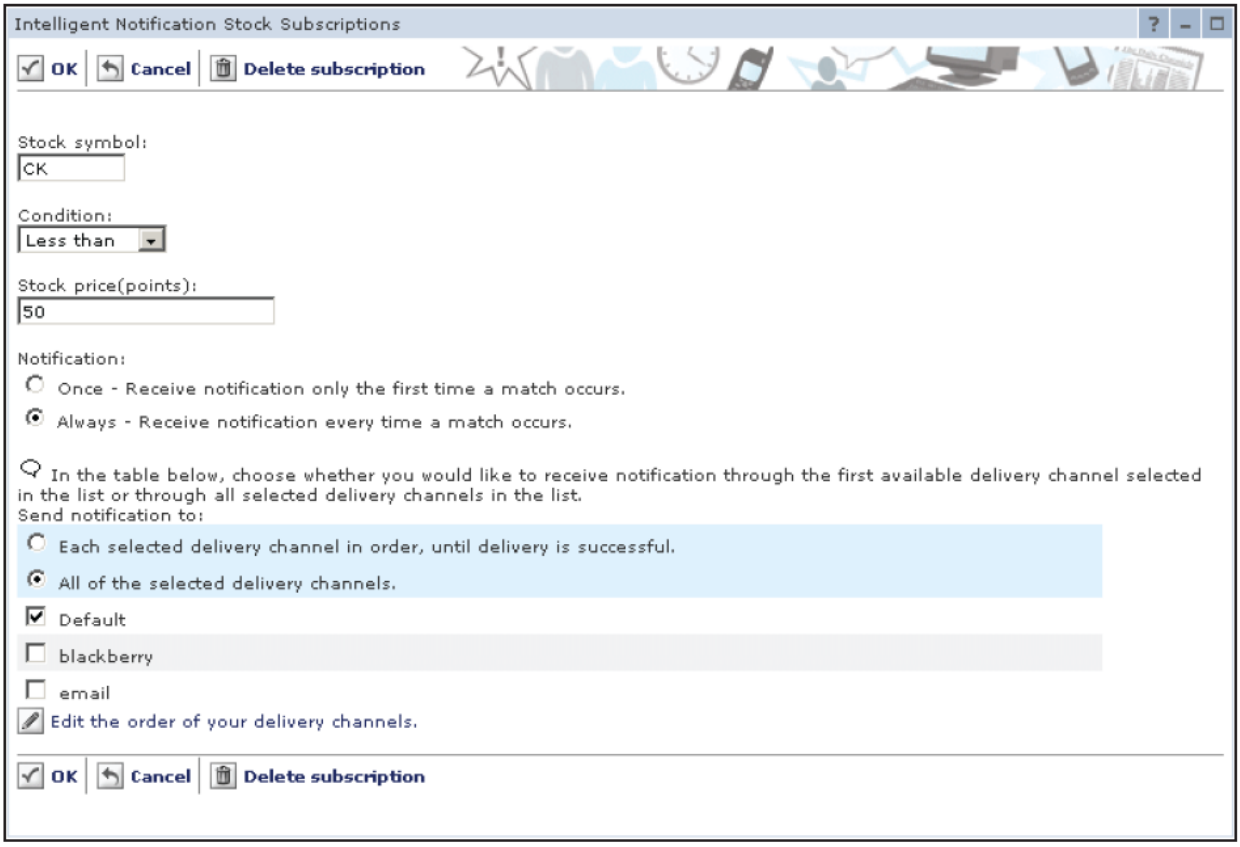


Figure 1-31 Configure the stock subscription

EX1009, 44 (showing a user configuring to be alerted when stock CK drops below a stock price of 50); *see also id*., 41. EX1003, ¶55.

The user is alerted via one or more of a plurality of notification methods, including a message within the message center portlet of the WebSphere application, an email, an instant message, and a text message to a mobile device. EX1009, 2, 7-14, 20-25, 29-44, 48-50.

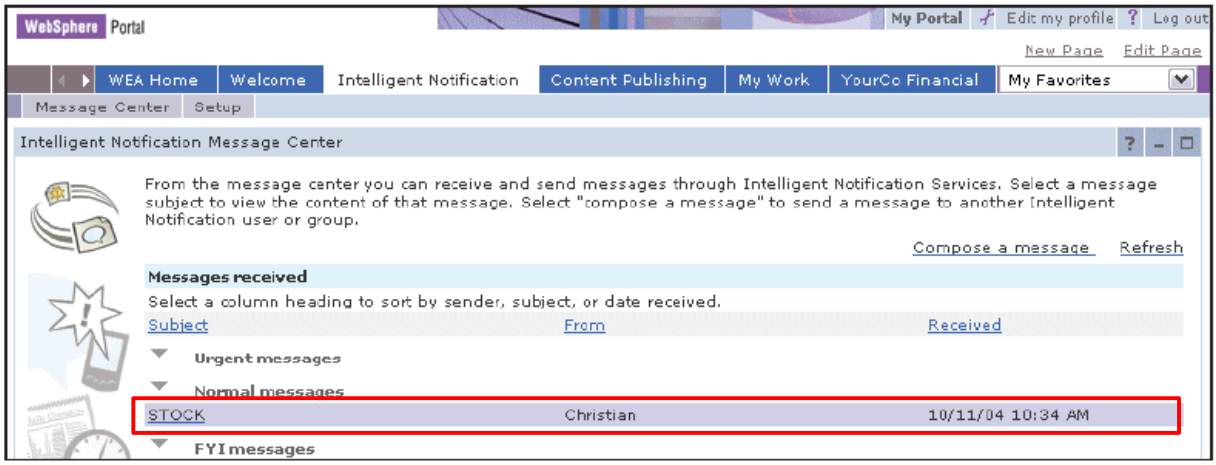


Figure 1-35 Stock notification received

EX1009, 48 (red annotation added) (showing receipt of an alert/notification within the WebSphere message center portlet).

6. You can select the new message to see the details (as shown in Figure 1-36).

Figure 1-36 Stock notification details

EX1009, 48 (showing details of the alert/notification received in the message center portlet).

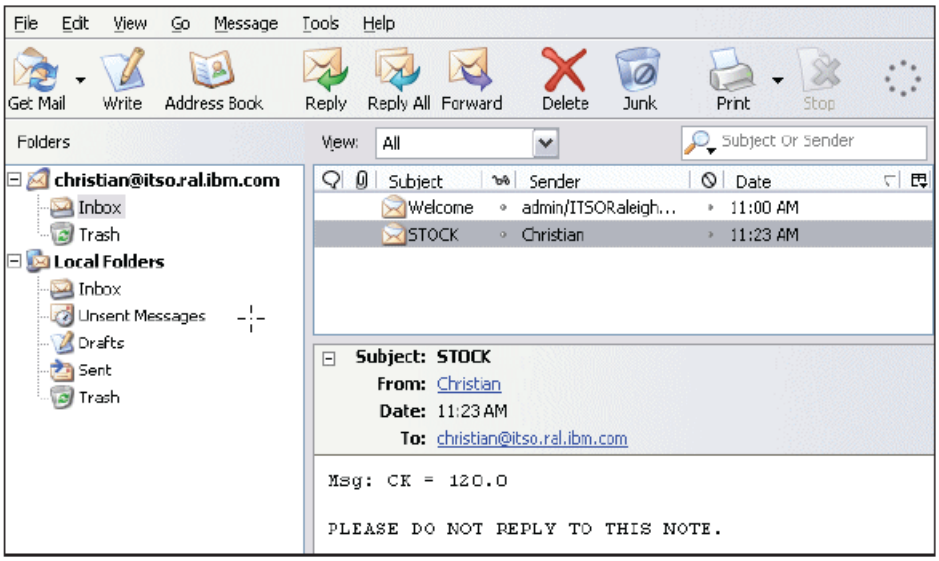


Figure 1-37 Stock notification to e-mail account

EX1009, 49 (showing an alert sent to a user's email).

Figure 1-38 Stock notification in the BlackBerry emulator

EX1009, 50 (showing an alert sent to a user's Blackberry). EX1003, ¶56.

Information (which includes alerts/notifications) is provided to the user based on their role (e.g., user, privileged user, manager, administrator, etc.) and is secured (e.g., encrypted) using a security protocol such as Secure Socket Layer (SSL). *E.g.*, EX1004, 5, 11, 19-20, 630, 899-900; EX1005, 5, 193, 380-383; EX1006, 315-337; EX1008, 234; EX1009, 277. A user's session is also tracked, such as by a Portlet Session Listener (*e.g.*, EX1004, 134-139, 285; EX1005, 264), and the user's online status (e.g., on an instant message service) is provided to other users (*e.g.*, EX1005, 18-19, 164, 228, 233-234, 480-482; EX1006, 28-29, 381, 384). EX1003, ¶57.

1. <u>WebSphere-Portal (EX1004)</u>

WebSphere-Portal qualifies as prior art under at least Section 102(b) (pre-AIA) at least because it was published in 2005 as part of IBM's well-known Redbooks series (EX1004, (a)-xxii; EX1003, ¶50), and available through IBM's

searchable website by at least November 2005 (EX1025, 17-24, 45-46[3]). *See also* EX1028 (copyright registration); EX1029 (library catalog entry). Its public availability is confirmed by the fact that it was cited by a 2007 patent publication. EX1037, [0009].

WebSphere-Portal is analogous art to the '948 patent because it is from the same field of endeavor: providing secure user-centric information to a user. EX1001, Abstract ("Display of and access to secure user-centric information …."), 1:66-4:15; EX1004, 4, 7 ("IBM WebSphere Portal provides a single, secure, interactive point of access to dynamic applications, information, people and processes"). EX1003, ¶58.

2. <u>Ben-Natan (EX1005)</u>

Ben-Natan qualifies as prior art under at least Section 102(b) (pre-AIA) at least because it published in 2004. EX1005, (iii) ("Copyright © 2004 by Wiley Publishing, Inc."); *see also* EX1030 (copyright registration); EX1031 (library catalog entry). It was publicly available on the website of an established publisher,

[3] WebSphere-Portal is the publication listed on the webpage archived by the Wayback Machine at least because the document number (SG24-6681-00) and ISBN (073849352X) are the same. EX1004, 1022; EX1025, 46.

Wiley, by at least November 2004. EX1005, (iii); EX1025, 5-16[4]; *Giora George Angres*, *Ltd*. *v*. *Tinny Beauty & Figure*, *Inc*., 116 F.3d 1497 (Fed. Cir. 1997).

Ben-Natan is analogous art to the '948 patent because it is from the same field of endeavor: providing secure user-centric information to a user. EX1001, Abstract ("Display of and access to secure user-centric information …."), 1:66-4:15; EX1005, xxv-xxx, 3-23, 241 ("From a user's perspective, portlets are functional entities represented on a portal page. A portal page typically contains several portlets that are arranged on the portal page in a grid of rectangles of varying size. Common examples of portlets are portal applications that show the local weather forecast, the stock ticker, or a user's email."). EX1003, ¶59

3. <u>WebSphere-Everyplace (EXS1006-1009)</u>

The WebSphere-Everyplace multi-volume reference (WebSphere-Everyplace-1 (EX1006), WebSphere-Everyplace-2 (EX1007), WebSphere-Everyplace-3 (EX1008), and WebSphere-Everyplace-4 (EX1009) qualifies as prior art under at least Section 102(b) (pre-AIA) at least because it was published in 2005 as part of IBM's well-known Redbooks series (EX1006, (c), xi; EX1007, (c), xi;

[4] Ben-Natan is the publication listed on the webpage archived by the Wayback Machine at least because the ISBN (0-7645-3991-4) is the same. EX1005, (iii); EX1025, 6, 8, 13, 16.

EX1008, (d), ix; EX1009, (d), xi; EX1003, ¶50), and was available through IBM's searchable website by at least January 2006 (EX1025, 17-24, 37-44[5]). *See also* EXS1032-1036 (copyright registration and library catalog entry). Its public availability is confirmed by the fact that volumes II and IV were cited by a 2007 patent publication. EX1038, [0015].

WebSphere-Everyplace is analogous art to the '948 patent because it is from the same field of endeavor: providing secure user-centric information to a user. EX1001, Abstract ("Display of and access to secure user-centric information …."), 1:66-4:15; EX1006, 2, 6 ("Everyplace Access, much like WebSphere Portal, uses portlets as a fundamental building block for applications. Portlets are visual windows that organize content from different sources, such as Web sites, e-mail, and business applications, into a single interface for individual or group access"); EX1007, 4; EX1008, 2; EX1009, 2. EX1003, ¶60.

[5] The WebSphere-Everyplace reference's volumes are the publications listed on the webpages archived by the Wayback Machine at least because the document numbers (SG24-6462-00, SG24-6463-00, SG24-6676-00, SG24-6677-00) and ISBN (0738490733, 0738492485, 0738490636, 0738492418) are the same. EX1006, 442; EX1007, 456; EX1008, 316; EX1009, 392; EX1025, 38, 40, 42, 44.

B. Austin-Lane (EX1010)

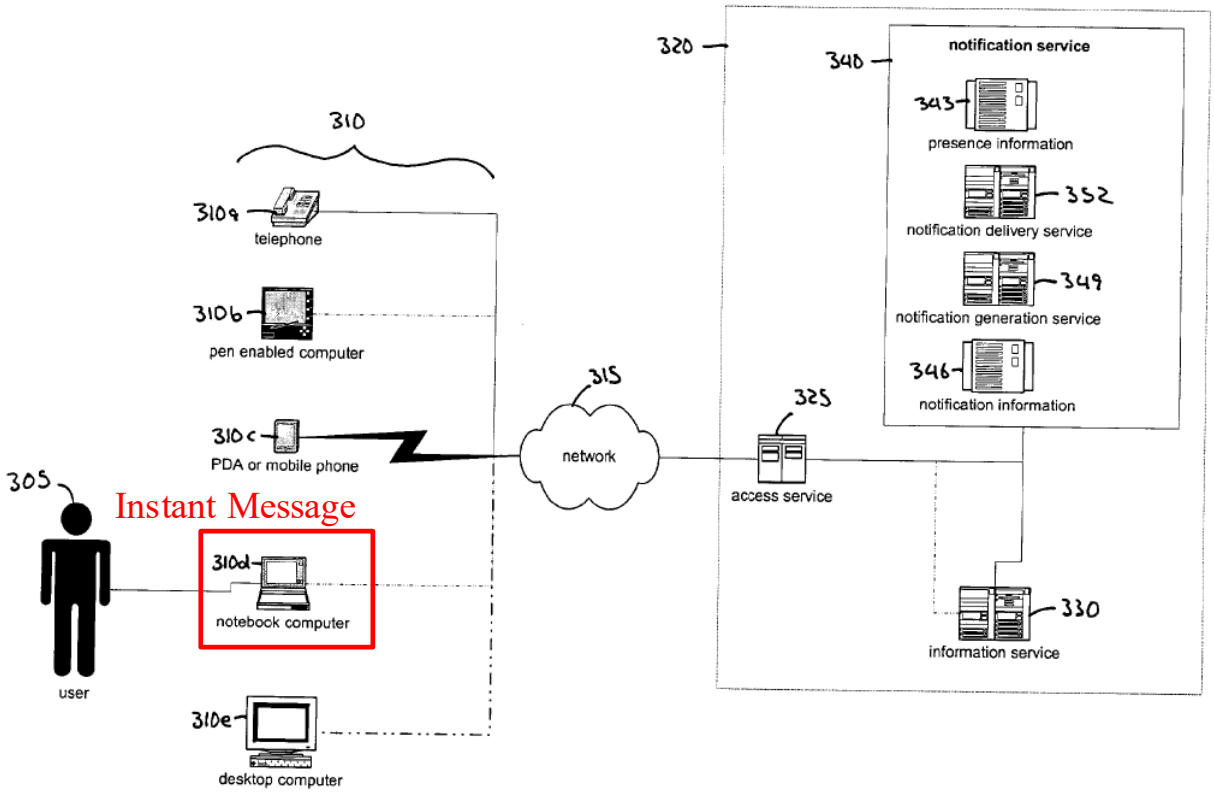
Austin-Lane is prior art under Section 102(b) (pre-AIA) at least because it published in 2004, more than one year before the alleged priority date of May 13, 2008. EX1010, Cover.

Austin-Lane is analogous art to the ’948 patent because it is from the same field of endeavor: providing secure user-centric information to a user. EX1001, Abstract (“Display of and access to secure user-centric information ….”), 1:66-4:15; EX1010, Title, Abstract, [0002] (“This disclosure generally relates to systems and methods of delivering information ….”), [0019], claim 1. EX1003, ¶61.

Not only does Austin-Lane describe permitting a user to set up an alert—just like the ’948 patent—it also describes setting up one of the same types of alerts, a stock-price alert. EX1001, 25:20-26:3, FIGS. 14-17; EX1010, [0036-40], [0057-58]. For example, the user can elect “to receive the stock[-price] alert when a specified stock exceeds a 52-week high.” EX1010, [0040]. EX1003, ¶62.

Austin-Lane also describes determining how to notify the user based at least in part on the user’s presence information (e.g., whether and on which device(s) the user is online) to ensure the user receives the alert “without significant delay” (*e.g.*, [0019], [0023]). EX1010, [0006-9], [0019], [0021], [0023-24], [0027], [0029], [0035], [0039], [0046], [0055]. For example, if “the presence information [] indicate[s] that the user 305 presently is online using notebook computer 310*d* …

and that the user 305 has an active IM connection … the notification delivery service 352 may provide the notification to the user 305 using an instant message to the notebook computer 310*d*." EX1010, [0046].



EX1010, FIG. 3 (red annotations added); EX1003, ¶63.

Austin-Lane describes how the presence information is received from an information service (*e.g.*, EX1010, [0035]) and how the alert is generated and formatted according to the determined notification method (EX1010, [0031], [0039], [0041], [0045-46], [0048], [0079]). EX1003, ¶64.

C. Combining The WebSphere References And Austin-Lane

Combining the three WebSphere references: A POSITA would have been motivated with a reasonable expectation of success to combine the teachings of the three WebSphere references (WebSphere-Portal, Ben-Natan (entitled "Mastering IBM WebSphere Portal"), and WebSphere-Everyplace) at least because they describe the same IBM system—WebSphere Portal—and explain how to design, develop, and implement Portal functionality on desktop computers and mobile devices. *E.g.*, EX1004, xix; EX1005, xxvi; EX1006, xi, 27-29. *See RPX Corp. v. Rothschild Connected Devices Innovations, LLC*, IPR2016-00443, Paper 8 (institution decision) at 21 (PTAB Jul. 7, 2016), Paper 28 (final written decision) at 35 (PTAB Jul. 6, 2017) (finding a motivation to combine two references because, *inter alia*, they described the same system). Moreover, WebSphere-Portal expressly identifies WebSphere-Everyplace as a related publication (EX1004, 1005) and both are IBM Redbooks that share at least one common author (EX1004, (b)-(c), xix-xx; EX1006, (b)-(c), xi-xiii; EX1007, (b)-(c), xii; EX1008, (c)-(d), ix-x; EX1009, (c)-(d), xii). Ben-Natan, in turn, provides "Expert Guidance" on building and deploying the same Portals described in WebSphere-Portal and WebSphere-Everyplace. EX1005, i; *see also id.*, 1-22, 473-493. EX1003, ¶65.

Indeed, the WebSphere references have the same or similar descriptions of Portal and its functionality, including that Portal comprises portlets (e.g., windows,

icons, etc.) that are assembled into portal pages and provide access to information of interest to a user. *Compare* EX1004, 8, 23-31, 51 ("Portlets are assembled into portal pages" and "combine Web-based content, application functionality and access to resources") *with* EX1005, xviii, 7-9, 241 ("[P]ortlets [] are arranged on the portal page in a grid …. Common examples of portlets are portal applications that show the local weather forecast, the stock ticker, or a user's email."), 242 *with* EX1006, 6 ("Portlets are visual windows that organize content from different sources, such as Web sites, e-mail, and business applications, into a single interface for individual or group access. … They are applications that … run inside the Portal Container of the Portal …."). Thus, when implementing or evaluating WebSphere Portal, a POSITA would have looked to the teachings of all three of these references to obtain a more comprehensive and complete understanding of the WebSphere Portal system, its features, capabilities, and interoperability of its corresponding modules, and how to implement it. EX1003, ¶66.

A POSITA would have been especially motivated to combine the teachings of WebSphere-Everyplace and Ben-Natan on WebSphere Everyplace Access (WEA) with the teachings of WebSphere-Portal and Ben-Natan on WebSphere Portal because, as explained by Ben-Natan, WebSphere Everyplace Access "extend[s] [P]ortal functionality to mobile devices," providing the benefit of allowing users to leverage Portal functionality from virtually anywhere. EX1005,

479; *see also id*., 473-476, 480; EX1006, 1-7, 20, 25, 27 ("Everyplace Access extends the functionality of the Portal offering by providing specialized portlets for mobile devices."), 28-29. EX1003, ¶67.

A POSITA would have reasonably expected to succeed in combining the teachings of these three references at least because the teachings are compatible with one another and were intended to be combined as part of the same system (WebSphere Portal). EX1004, 1005; EX1005, 473-476, 479-480; EX1006, 1-7, 20, 25, 27-29. For example, the three references disclose the same compatible features, including arranging portlets in a grid on a Portal Page (*e.g*., EX1004, 28, 49; EX1005, 241; EX1006, 30, 34), enabling a user to sign in to their account with single sign-on (SSO) (*e.g*., EX1004, 7, 630; EX1005, 382-401; EX1006, 5; EX1007, 182-187), and using Secure Socket Layer (SSL) to encrypt information relayed between the servers and the user devices (*e.g*., EX1004, 899-900; EX1005, 380-383; EX1006, 315-337). That is, a skilled artisan would not have expected any incompatibilities between the teachings of the three WebSphere references relied on herein. EX1003, ¶68.

Combining the WebSphere references with Austin-Lane: A POSITA would have been motivated with a reasonable expectation of success to combine the WebSphere references' teachings on the WebSphere system, including Portal and Everyplace Access, with Austin-Lane's teachings to determine a notification method for the alert based on the user's presence information. EX1003, ¶69.

Specifically, a POSITA would have been motivated to modify the WebSphere system to select the notification method based on session data (e.g., the user's online presence), as taught by Austin-Lane, to ensure the user receives the alert promptly. Austin-Lane explains that doing so (e.g., selecting a notification method based on the user's online presence so that the alert is to a device (e.g., notebook computer) and, optionally, an application (e.g., instant messaging) on that device that the user is currently using) ensures the user receives the alert "without significant delay." *E.g.*, EX1010, [0046]; *see also id.*, [0006-9], [0019], [0021], [0023-24], [0027], [0029], [0035], [0039], [0055]. EX1003, ¶70.

A POSITA would have reasonably expected to succeed in incorporating Austin-Lane's teachings in the WebSphere system at least because it requires only minor software changes that were well within the skill of a POSITA. The WebSphere system already includes a notification service that allows the user to set up custom alerts for specific events (e.g., when a stock price crosses a user-set threshold), and incorporation of Austin-Lane's teachings would have required simple adaptation of these existing notifications such that they were based on the session information taught by both WebSphere and Austin-Lane. EX1009, 1-10, 19-25, 29-33, 40-50, 80. The WebSphere system already tracks the user's active sessions, such as their online status on an instant messaging service. *E.g.*, EX1004, 124-125, 134-140, 156-157, 278, 285, 468, 630, 638-640, 643, 665, 726, 899-900; EX1005, 18-19, 164, 228,

233-234, 249-250, 253-254, 263-264, 270, 365-401, 480-482; EX1006, 28-33, 309-311, 381, 384; EX1007, 321; EX1009, 347; *infra* Section VII.C.1.h (element [1.8]); *see also* EX1038, [0017-19] (IBM-assigned patent application describing how a user's availability or presence can be determined using known services and/or agents). And the WebSphere references and Austin-Lane disclose setting the same type of alerts (stock alerts) and disclose providing the alert in the same way (visually). EX1009, 40-50, 80; EX1010, [0036-40], [0057-58]. Thus, given how much the WebSphere references already disclose about its alerts (and how similar and complementary their teachings are to Austin-Lane's) improving the WebSphere system's alerts to be determined based on session data would have required only minor software changes, thus confirming the reasonable expectation of success. EX1003, ¶71.

When incorporating Austin-Lane's teachings to determine a notification method based on session data, a POSITA would have implemented the WebSphere system such that the determination was made using the types of session data taught by the WebSphere references and Austin-Lane. *Infra* Section VII.C.1.h. Indeed, session-based notification determination could not be made without first receiving the session data. *Infra* Section VII.C.1.h. EX1003, ¶72.

Under this obvious implementation, the notification data is generated according to the notification method at least because the WebSphere references and

Austin-Lane teach this (*e.g.*, EX1006, 10; EX1009, 2-3, 7-14, 20-25, 32, 40-50, 58, 60, 80-82, 147; EX1010, [0031], [0039], [0041], [0045-46], [0079]), and because a POSITA would have understood that the notification data would need to be generated according to the determined notification method to ensure the notification is successfully delivered and properly provided. *Infra* Section VII.C.1.k. For example, a POSITA would have understood or at least found it obvious that notification data would depend on the type of alert and the communication protocol used to send the alert (e.g., the content and/or format of the notification data for a visual alert is different than for an audible alert, and that even for visual alerts, the notification data is different for text (e.g., instant message) than for graphics (e.g., flashing icon)). Further, a POSITA would have understood that the content and/or format of the notification data would depend on the communication protocol being used (e.g., HTTP vs. SMS vs. SMTP) and/or the markup language being used (e.g., HTML vs. XML vs. RFC822 email headers). EX1003, ¶73.

1. Claim 1

a) Element [1.1]

[1.1][6] An apparatus to provide secure user-centric information on at least one user platform operated by a user, and to evaluate at least some of the secure user-centric information, the apparatus comprising:

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶74.

The WebSphere references disclose an apparatus (one or more "server[s]") that provide secure user-centric information (encrypted information such as alerts, financial (e.g., stock) information, weather information, email, news, etc., that a user can access only after signing into their account) on at least one user platform ("client" or "client device" such as a desktop computer/workstation, notebook/laptop computer, cellular/mobile phone, PDA, etc.) operated by a user. EX1004, 2 ("Personalization enables the portal to deliver user-specific information targeting a user based on their unique information."), 4-11, 42-43, 48-49, 116, 152-154, 630, 899-900, 956; EX1005, 4-6, 16, 141, 164, 241, 473-479, 495; EX1006, 5, 41-42, 310-311, 316; EX1007, 4; EX1009, 2-3, 30, 58, 80.

[6] Reference numbers in the format of [claim#.element#] are added throughout for ease of reference.

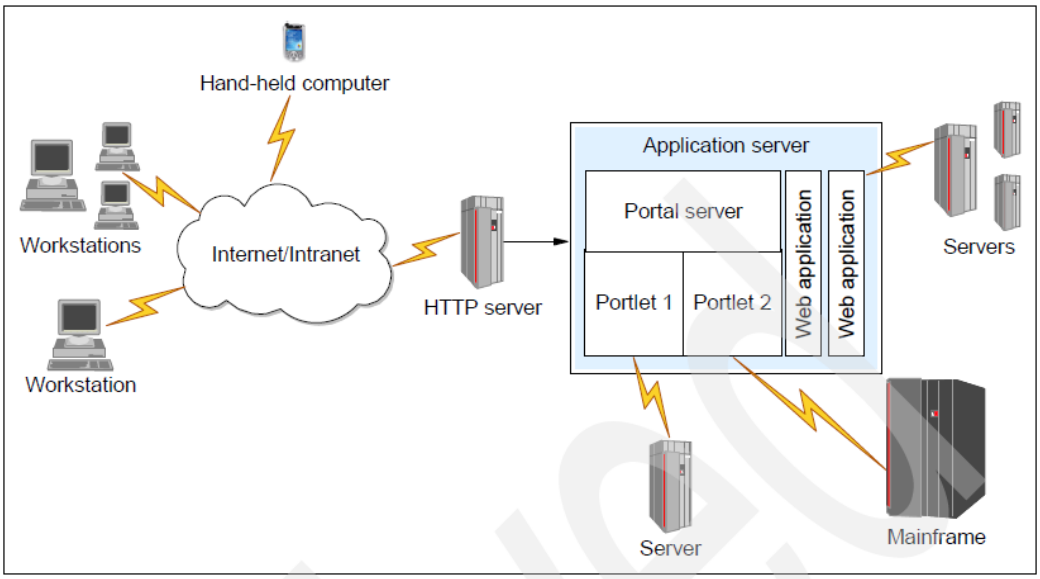


Figure 1-13 Portal Solutions - portlet to remote application

EX1004, 43 (showing one or more servers providing secure user-centric information to one or more user platforms); *see also id*., 5, 10, 42; EX1005, 16, 26, 43-44; EX1006, 3, 5, 24, 41, 237; EX1009, 3, 359-360.

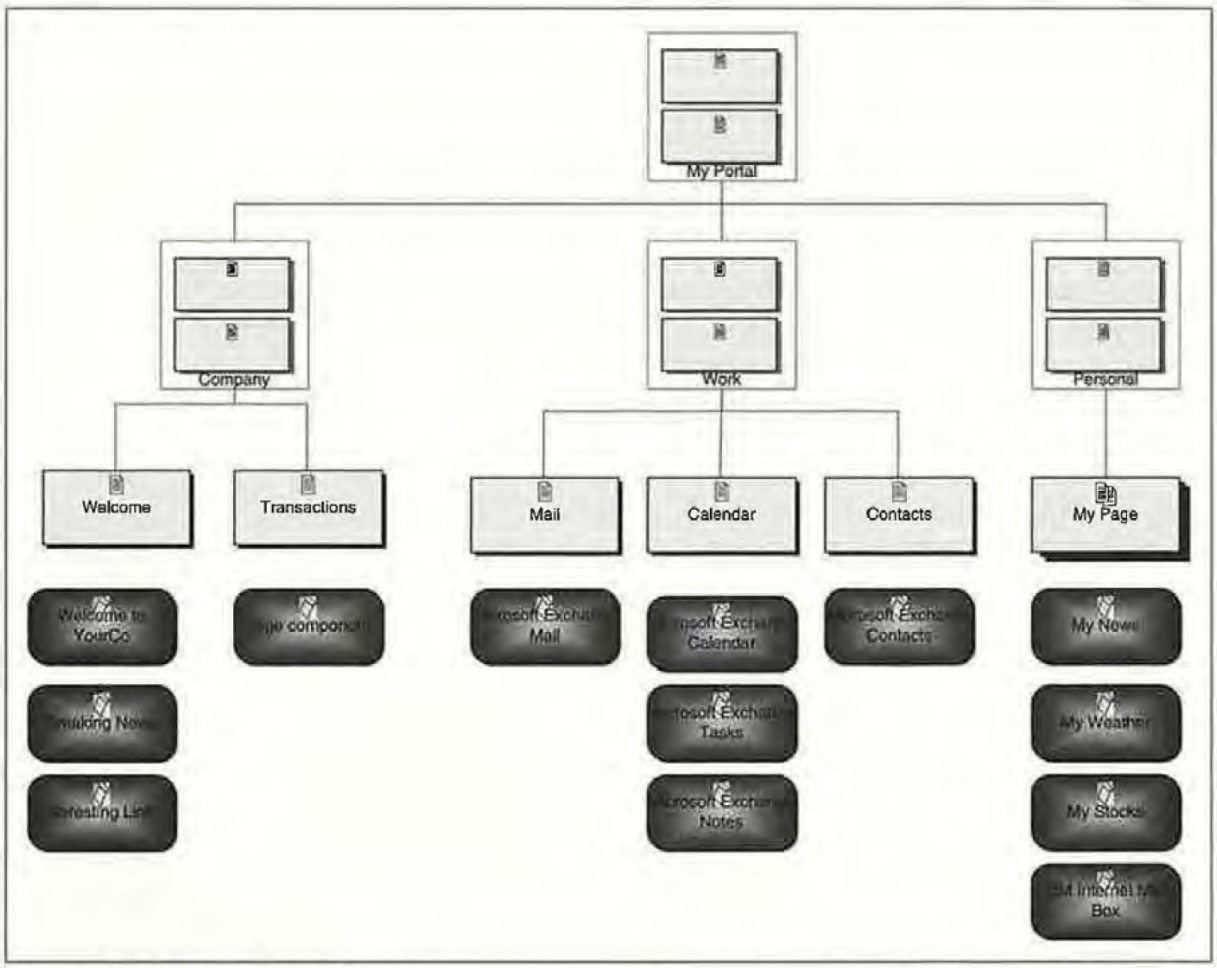


Figure 7-11 New Portal structure.

EX1005, 141 (showing examples of secure user-centric information provided to the at least one user platform, including, "news," "email," "contacts," "notes," "weather," "stocks," etc.); *see also* EX1004, 49; EX1006, 34; EX1008, 182. EX1003, ¶75.

As explained below for elements [1.9-10], the apparatus evaluates at least some of the secure user-centric information (e.g., stock price information) by monitoring and comparing this information to a threshold condition (e.g., a user-set

stock price threshold) to determine whether to trigger a notification. *Infra* Sections VII.C.1.i-j. EX1003, ¶76.

The WebSphere references disclose using, for example, secure socket layer (SSL) to secure (encrypt) communications, including the user-centric information, between the apparatus and the at least one user platform. EX1004, 11, 630, 899-900; EX1005, 380-383; EX1006, 22, 315-337; EX1008, 234; EX1009, 277. This "enables secure message communication between servers and clients over the Internet." EX1004, 899. The WebSphere references also disclose requiring a user to log in to their account, e.g., using single sign-on (SSO) before they can gain access to the user-centric information. EX1004, 5, 7, 11, 27, 33, 51, 76, 134-137, 630, 642; EX1005, 15, 195-196, 225-226, 270, 382-401; EX1006, 5, 30-33, 310-311, 378; EX1007, 28, 182-187, 320-322, 332, 342; EX1008, 70, 162, 182-184; EX1009, 289-290, 314, 324-355. Moreover, it was well known to use security protocols to encrypt communication (*supra* Section IV.B.1) and to require a user to log in to their account (*supra* Section IV.B.2) EX1003, ¶77.

b) <u>Element [1.2]</u>

[1.2] at least one communication interface facilitating wired and/or wireless communications with the at least one user platform via one or more transmission media;

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶78.

Although the WebSphere references do not use the words "communication interface" or "transmission media," a POSITA would have understood or found it obvious that the apparatus includes at least one communication interface (e.g., ethernet port, wireless transceiver) facilitating wired and/or wireless communication with the at least one user platform via one or more transmission media (e.g., ethernet cable, electromagnetic radiation) at least because the WebSphere references disclose that the apparatus communicates with the at least one user platform over the Internet using one or more communication protocols, including TCP/IP, 802.11, and HTTP. EX1004, 10-11, 42-43, 56, 81, 102, 997; EX1005, 13, 16, 26-27, 43-44, 71, 74, 324, 476, 482-483; EX1006, 3, 101, 113-114.

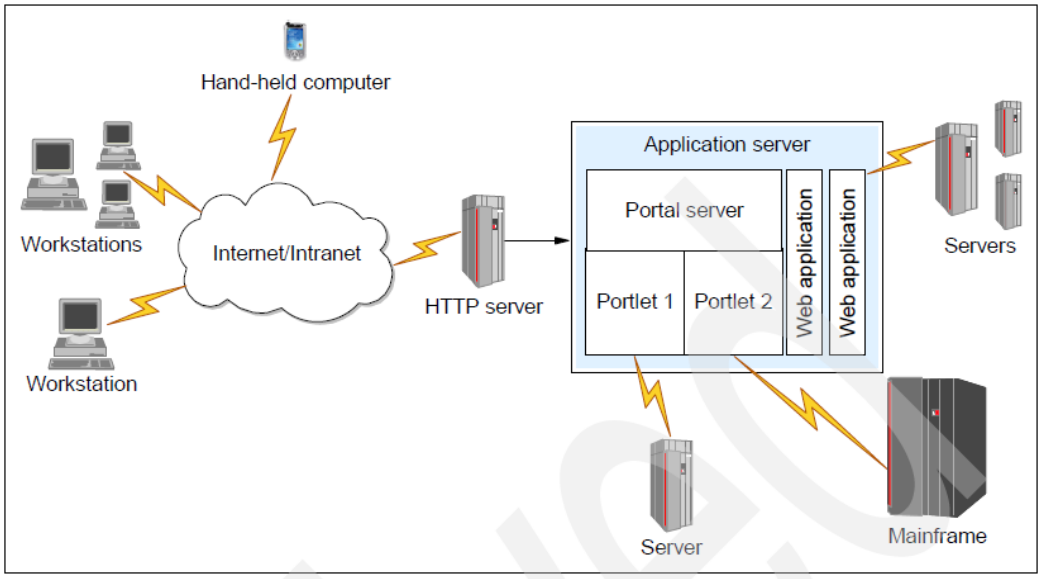


Figure 1-13 Portal Solutions - portlet to remote application

EX1004, 43.

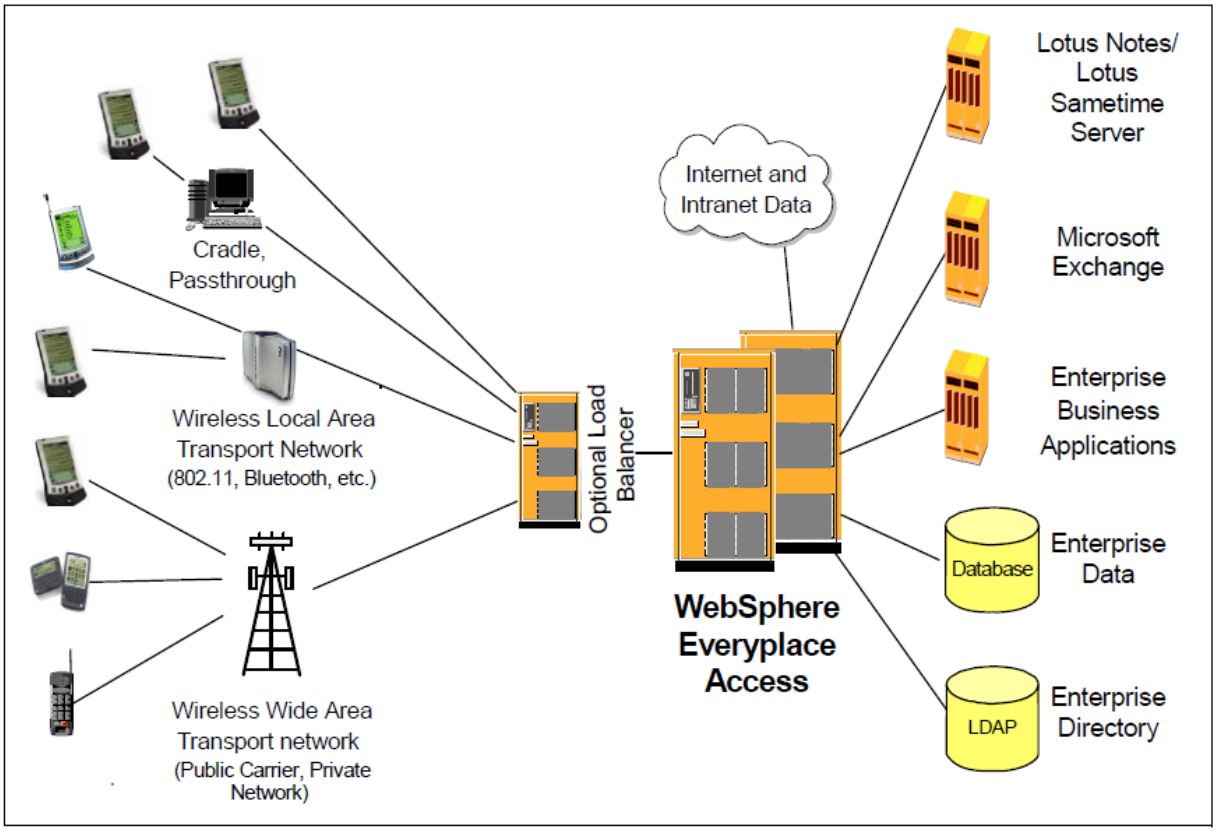


Figure 1-1 Logical view of mobile computing with WebSphere Everyplace Access

EX1006, 3. Indeed, that the WebSphere references teach encrypting communications using SSL—an encryption system used to "ensure privacy when information is sent across the Internet"—confirms that the apparatus and user platforms communicate over the Internet. EX1004, 11. EX1003, ¶79.

The references also disclose communicating over a wireless network. *E.g.*, EX1006, 3. To perform these communications over a wireless wide area network and/or the Internet, a POSITA would have understood or at least found it obvious that the apparatus includes a communication interface at least because they understood that a communication interface is needed to communicate over a wide

area network and the Internet. For example, a POSITA would have understood that for a wired connection, the apparatus (one or more servers) includes a port (e.g., ethernet port) that connects to the Internet via a cable (e.g., ethernet cable), and for a wireless connection, the apparatus (one or more servers) includes a wireless transceiver that emits electromagnetic radiation. EX1003, ¶80 (citing EX1042).

Moreover, a POSITA would have understood or at least found it obvious that the apparatus includes a communication interface to perform at least the other disclosed types of communications, including email over SMTP and texting over SMS, at least because these types of communications also require a communication interface. EX1006, 5, 10, 399. EX1003, ¶81.

c) <u>Element [1.3]</u>

[1.3] at least one memory storing processor-executable instructions; and

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶82.

The WebSphere references disclose that the apparatus (one or more servers) includes at least one memory ("2 GB of memory at a minimum"). EX1006, 24; *see also id*., 237; EX1004, 8, 16-18, 102, 502, 1004; EX1005, 20, 26, 44. This memory stores processor-executable instructions ("software"). EX1004, 101-113; EX1005, 43-44; EX1006, 21-25, 236-285. In particular, the WebSphere references disclose installing the WebSphere software on the apparatus, which a POSITA would

understand to involve storing the processor-executable instructions on the at least one memory. *Id*. EX1003, ¶83.

Moreover, a POSITA would have known that computers (including servers) work by fetching processor-executable instructions from memory and that the apparatus (one or more servers) would not be able to perform their intended computing functions without such memory and processor-executable instructions. For at least this additional reason, a POSITA would have understood or found it obvious that the apparatus (one or more servers) includes at least one memory storing processor-executable instructions. EX1003, ¶84 (citing EX1042).

d) <u>Element [1.4]</u>

[1.4] at least one processor communicatively coupled to the at least one communication interface and the at least one memory, retrieving processor-exectuable [sic] instructions from the at least one memory, and executing the processor-executable instructions to provide and evaluate at least some of the secure user-centric information by:

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶85.

The WebSphere references disclose that the apparatus (one or more servers) includes at least one processor ("Pentium 4 processor") (EX1005, 26, 44; *see also* EX1004, 102, 107, 1004; EX1006, 24, 237) and that the apparatus (one or more servers) runs the WebSphere software (*e.g.*, EX1004, 155-201; EX1005, 65-103; EX1007, 3-21; EX1009, 79-138). A POSITA would have understood or at least

found it obvious that the at least one processor is communicatively coupled to the at least one communication interface and the at least one memory at least because it would need to be to be able to perform the WebSphere references' disclosed functionality. EX1003, ¶86.

For example, the WebSphere references disclose that the apparatus (one or more servers) evaluates at least some of the secure user-centric information (e.g., stock price information), such as to determine whether the stock price meets a user-defined threshold, and provides that information to the user by sending it to one or more of the user's devices/platforms (e.g., over the Internet). EX1009, 1-10, 19-25, 29-33, 40-50, 80-82; *see also* EX1004, 10-11, 42-43, 56, 81, 102, 997; EX1005, 13, 16, 26-27, 43-44, 71, 74, 324, 476, 482-483; EX1006, 3, 101, 113-114. A POSITA would have understood or at least found it obvious that the processor would need to be communicatively coupled to the at least one memory to retrieve the processor-executable instructions needed to perform this functionality at least because this is how computers (including servers) work; the processor retrieves the instructions from memory and executes the instructions to perform computing tasks (e.g., providing and evaluating secure user-centric information). Further, a POSITA would have understood or at least found it obvious that the at least one processor would need to be communicatively coupled to the at least one communication interface to

be able to instruct the communication interface to send the stock information to the user's device(s). EX1003, ¶87 (citing EX1042).

e) <u>Element [1.5]</u>

> [1.5] A) implementing a channel grid framework including a matrix of a plurality of authorized channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information based at least in part on information access rights and/or security protocols respectively associated with the plurality of authorized channels, the plurality of authorized channels including at least a first channel through which the user receives and/or interacts with first channel information constituting a first portion of the secure user-centric information;

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶88.

WebSphere-Portal discloses that the apparatus (one or more servers) is programmed to implement a channel grid framework (a Portal page) including a matrix of channels (portlets) through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information (alerts, financial (e.g., stock) information, weather information, email, news, etc.). EX1004, 6, 8, 18-19, 28-29, 30 ("Portlets provide access to specific services or information, for example, a calendar or news feed."), 34, 48-49, 60, 116, 152-153, 241, 630, 946-947, 956, 989, 1000; EX1005, 13, 141, 241 ("[a] portal page typically contains several portlets that are arranged on the portal page in a grid of

rectangles of varying size"), 242-247, 277, 493-494; EX1006, 6, 10, 30, 34, 42, 390; EX1007, 290-293, 308-311, 319-321; EX1008, 66-67, 182; EX1009, 1-50.

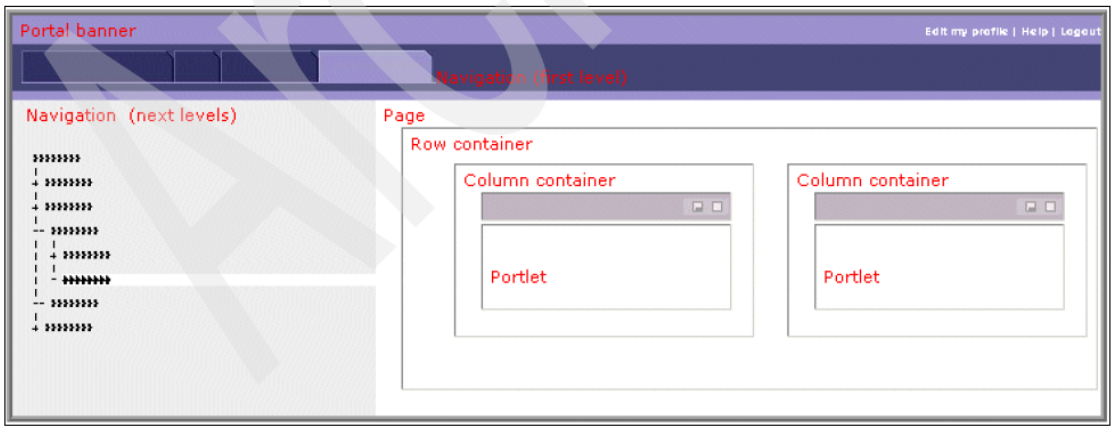


Figure 1-9 Portal page layout

A portal page is made up of the following elements.

EX1004, 28.

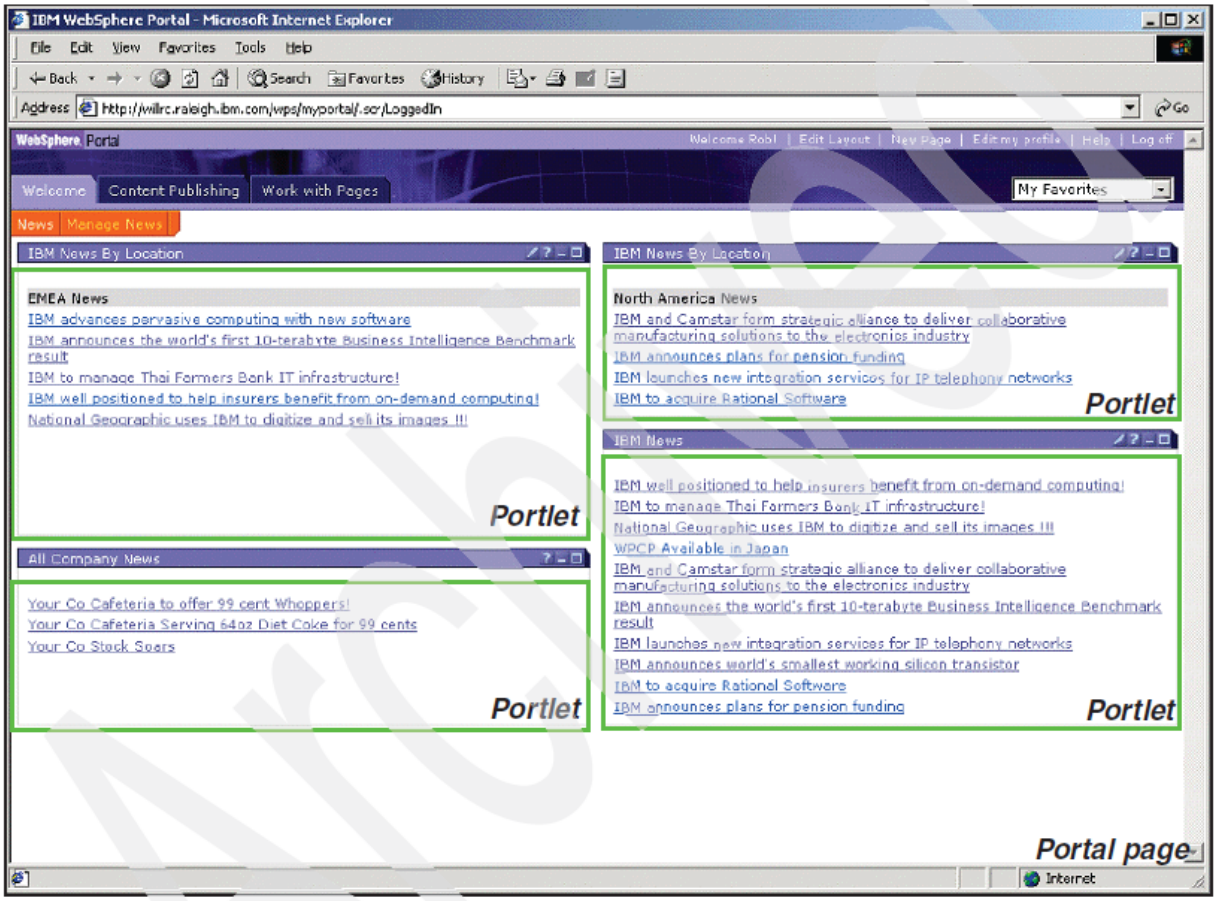


Figure 2-1 Portal page and portlets

EX1004, 49.

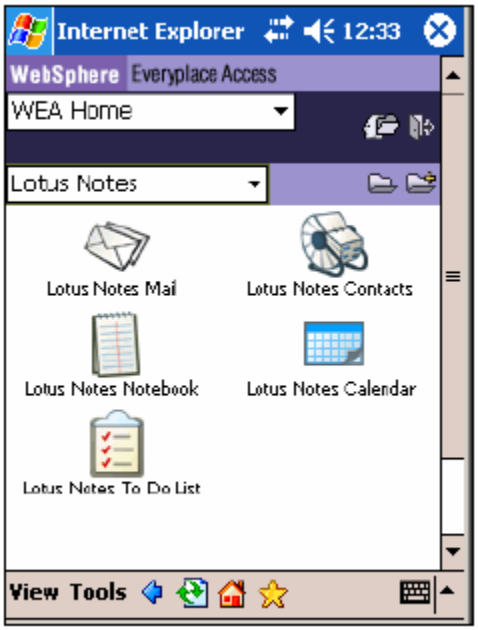


Figure 2-1 Lotus Notes PIM and e-mail portlets

EX1006, 30.

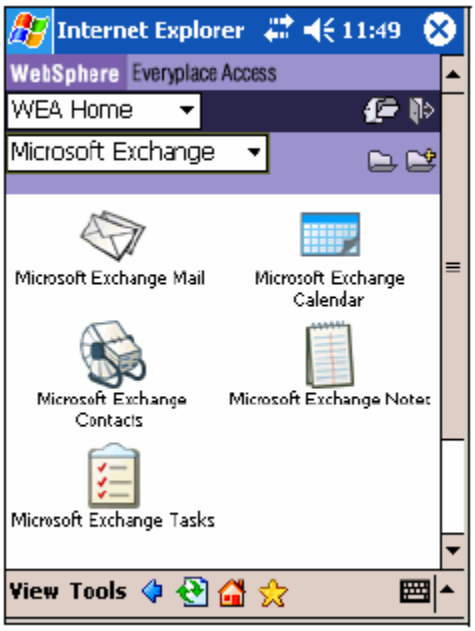


Figure 2-7 Microsoft Exchange PIM portlets

EX1006, 34. EX1003, ¶89.

Indeed, the Portal page developer can add as many rows and columns of portlets as they desire to the Portal page. EX1004, 247; EX1005, 134-139. "[Y]ou may customize your layout by adding as many containers as you want. For each column container you may set its width, as well as add row containers within it. You may add column containers within a column container, and of course you may add portlets in both." EX1005, 139. Moreover, it would have been an obvious design choice to present the portlets in a grid, as this was one of a limited number of well-known ways to display widgets, such as portlets. *Supra* Section IV.B.1. EX1003, ¶90.

As one example of a first channel through which the user receives and/or interacts with first channel information constituting a first portion of the secure user-centric information, a user receives and/or interacts with stock information from a stock portlet and/or a notification message center portlet. EX1004, 18, 48-49, 152, 989, 1000; EX1005, 241-242, 277; EX1006, 10; EX1007, 283-293, 308-324; EX1009, 6, 30, 40-50.

Figure 9-35 Portlet view after applying the annotator

EX1007, 287 (showing stock price information displayed within a stock portlet); *see also* EX1007, 319).

Figure 1-36 Stock notification details

EX1009, 48 (showing stock price information displayed within the notification message center portlet); *see also id*., 7, 9, 12, 28, 58; EX1006, 10. EX1003, ¶91.

The portlets are channels at least under Petitioner's proposed construction. *See* Section VI.A.1. As explained earlier for this element ([1.5]) and element [1.1], each portlet comprises a visual component (e.g., the stock portlet and message center portlet on the Portal Page) on the user's platforms/devices that provides the user access to and interaction with the user-centric information. *E.g*., EX1004, 18, 48-49, 152, 989, 1000; EX1005, 241-242, 277; EX1006, 10; EX1007, 283-293, 308-324; EX1009, 6, 30, 40-50. Further, each portlet comprises a component on the one or more servers that delivers the information to the user platforms/devices. EX1004, 4-

11, 42-43, 48-49, 116, 152-154, 630, 899-900, 956; EX1005, 4-6, 16, 141, 164, 241, 473-479, 495; EX1006, 5, 41-42, 316; EX1007, 4; EX1009, 2-3, 30, 58, 80.

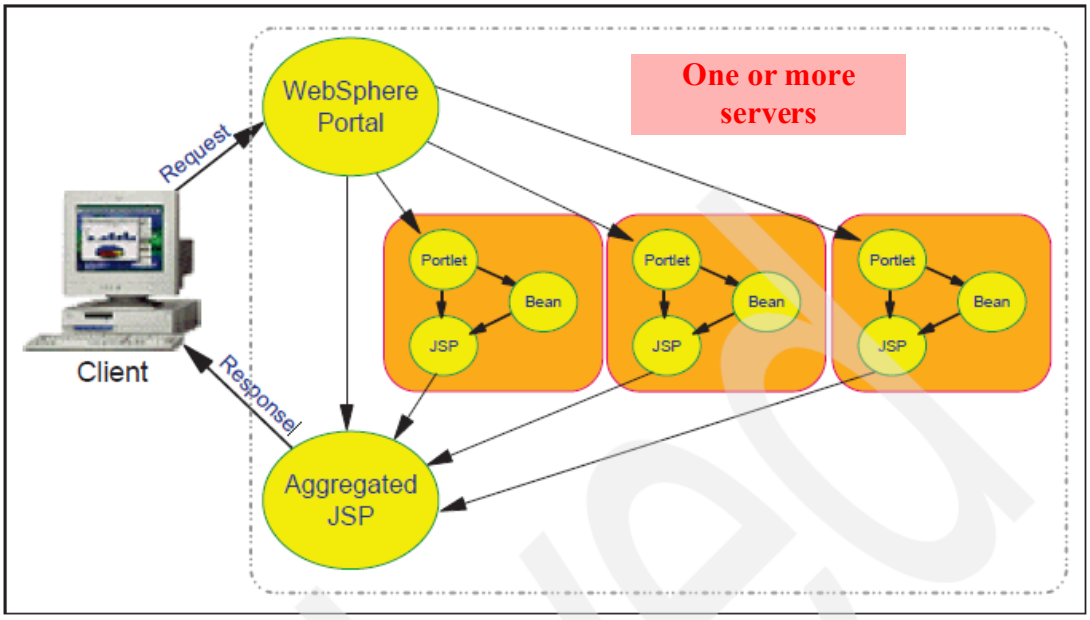


Figure 1-8 Portlet MVC architecture

EX1004, 26 (red annotation added). EX1003, ¶92.

As just one example, the one or more servers deliver the first channel information (the stock price information) to at least (1) the stock portlet and/or (2) the one or more delivery channels of the Intelligent Notification system, such as the message center portlet. EX1004, 14 ("WebSphere Portal provides an engine whose main responsibility is to aggregate content from different sources and serve the aggregated content to multiple devices"), 18, 48-49, 152, 989, 1000; EX1005, 241-242, 277; EX1006, 9-11; EX1007, 283-293, 308-324; EX1009, 1-3, 4 ("The Subscription Manager receives data from different content sources … matches the

content against the subscription criteria … [and] fires a trigger … [i]f a match occurs."), 5-50, 79-141.

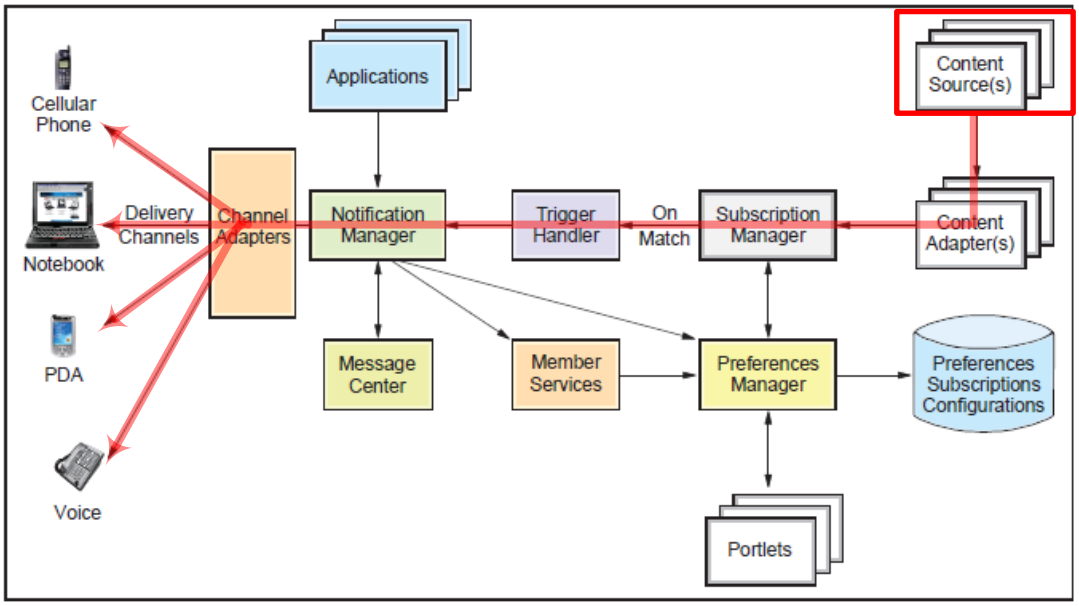


Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotations added). EX1003, ¶93.

The combination further teaches that a user receives and/or interacts with respective portions of the secure user-centric information based at least in part on information access rights (roles/permissions/privileges) (EX1004, 5, 11, 15, 19-20, 39; EX1005, 8, 191-193) and/or security protocols (encryption protocols (e.g., SSL) and/or user authorization protocols (e.g., SSO)) (EX1004, 5, 7, 11, 27, 33, 51, 76, 134-137, 630, 642, 665, 899-900; EX1005, 5, 8, 15, 195-196, 225-226, 270, 380-401; EX1006, 5, 22, 30-33, 310-311, 315-337, 378-383; EX1007, 28, 182-187, 320-322, 332, 342; EX1008, 70, 162, 182-184, 234; EX1009, 277, 289-290, 314, 324-355) respectively associated with the plurality of authorized channels. EX1003, ¶94.

For example, the user must sign into their account with their username and password to access the secure user-centric information:

Figure 21-16 Running Edit mode of the portlet

EX1004, 665.

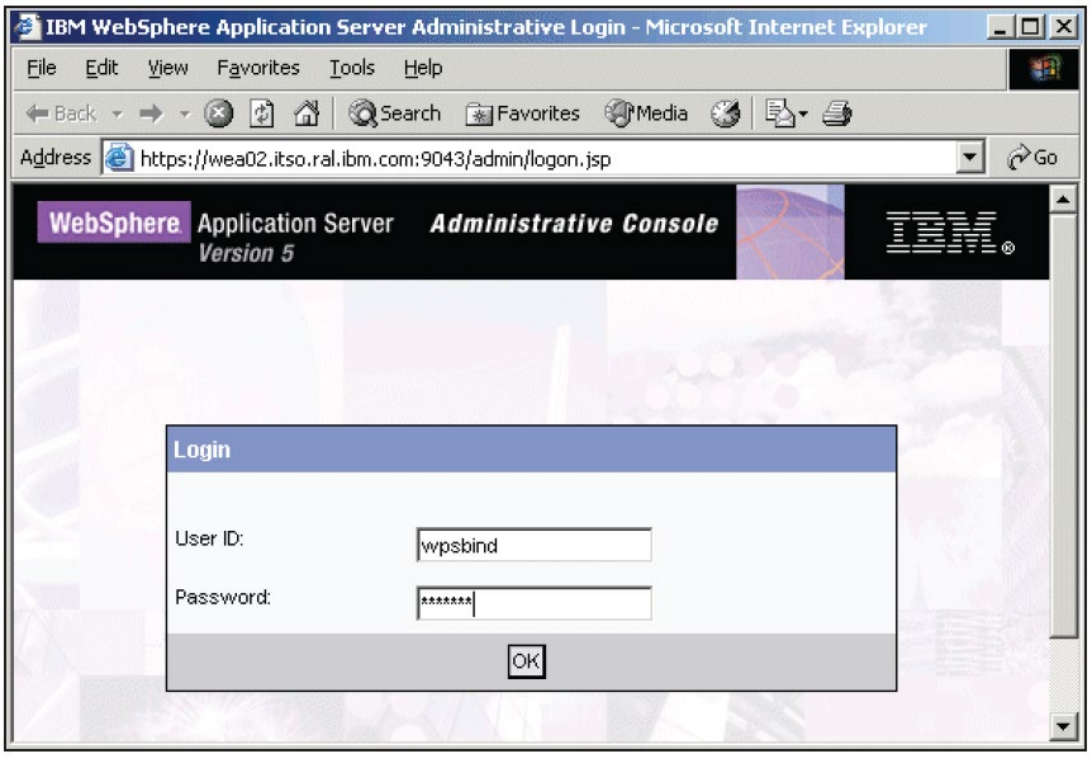


Figure 10-16 WebSphere Everyplace Access Login

EX1009, 347.

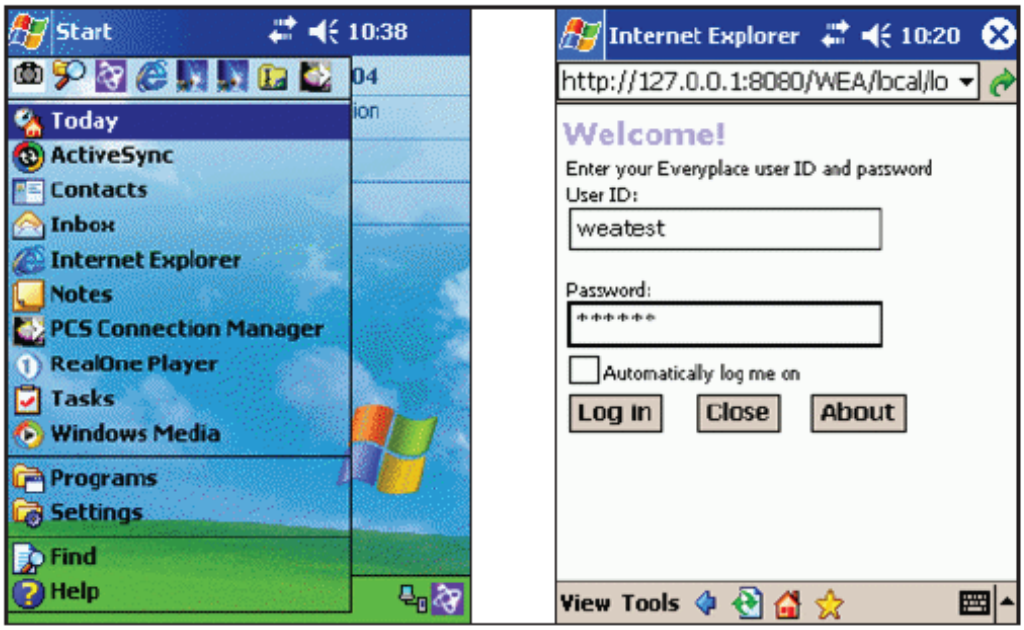


Figure 10-19 Login to WebSphere Everyplace Access

EX1007, 321. EX1003, ¶95.

In at least some instances, the user's access rights are portlet-specific in that at least one portlet (the Sametime messaging portlet) requires the user to sign in with the user's login information for that specific portlet. EX1006, 378-383.

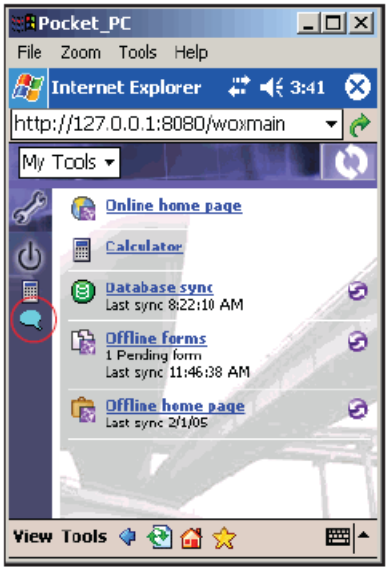


Figure 10-3 Starting Sametime from Everyplace Client on Pocket PC

Figure 10-4 Startup window on Pocket PC

EX1006, 378. EX1003, ¶96.

The user's access to the secure user-centric information is limited by their role and permissions:

Table 10-2 Role Definitions

ROLE	DESCRIPTION
Administrator	Super-user. Can do everything including creating, configuring, and deleting resources. Administrator can also change the access control configuration
Security Administrator	Can create and delete role assignments for roles tied to specific resources
Delegator	Can assign users or user groups to roles
Manager	Creates, configures, and deletes new or existing resources for use by one or more users
Editor	Creates, and configures new or existing resources for use by one or more users
Privileged User	Can create new private pages, view portal content, and personalize portlets/pages
User	Can view portal content
No Access	Can do nothing

EX1005, 193. EX1003, ¶97.

Moreover, as explained above for element [1.1], the WebSphere references disclose using, for example, secure socket layer (SSL) to "enable[] secure message communication between servers and clients over the Internet." EX1004, 899; *see also id.*, 11, 630, 900; EX1005, 380-383; EX1006, 22, 315-337; EX1008, 234; EX1009, 277. EX1003, ¶98.

f) <u>Element [1.6]</u>

[1.6] B) establishing a user profile to identify user preferences, platform identities, and service support instructions that determine how the secure user-centric information behaves on the at least one user platform;

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶99.

The WebSphere references disclose that the apparatus (one or more servers) is programmed to establish a user profile, which Ben-Natan defines as "[t]he collection of all the pieces of information relating to one user." EX1005, 164; *see also* EX1004, 8-9, 401-406, 411, 462, 949; EX1005, 11, 14, 164-165, 267, 342, 365-366; EX1006, 5, 7, 83, 411-412, 418; EX1007, 87, 115-118, 130, 243-245, 267; EX1008, 55, 101, 121-122, 128, 144-145, 157-161; EX1009, 6.

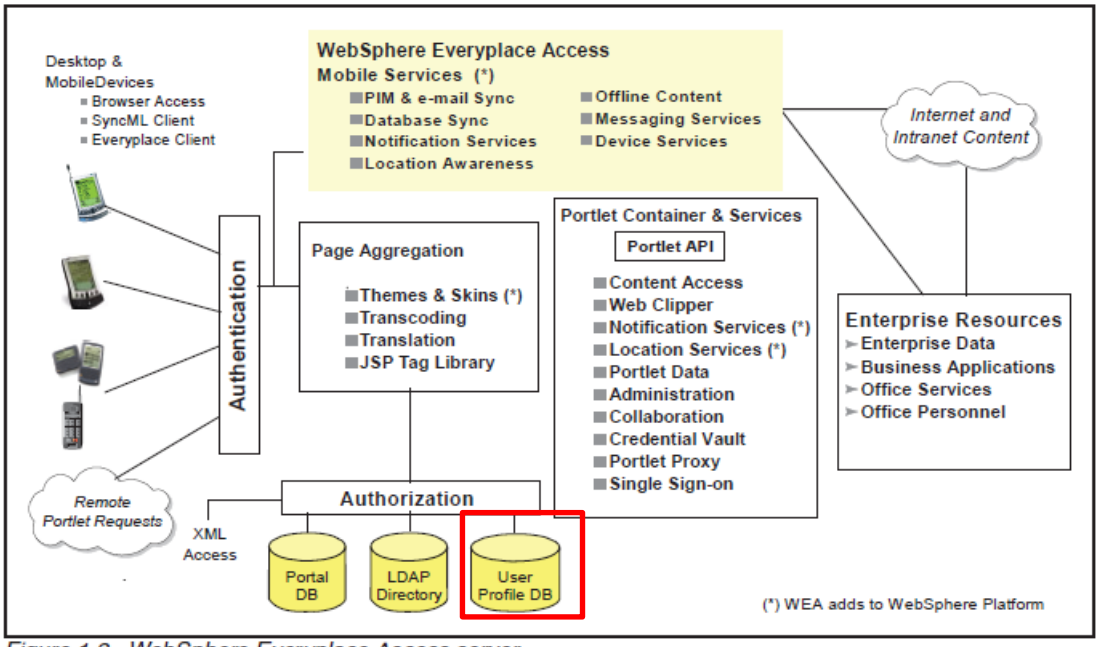


Figure 1-2 WebSphere Everyplace Access server

EX1006, 5 (red annotation added) (showing a user profile database that stores the user profile information); *see also*, *e.g.*, EX1005, 14 ("User profile information can be supported in an LDAP and/or a database."). EX1003, ¶100.

Part of this "information relating to [the] user" includes: (1) "user preferences," (EX1004, 6, 16, 430, 466; EX1005, 353; EX1006, 5, 10, 13; EX1008, 134, 157; EX1009, 2, 7; *see also* EX1004, 274; EX1005, 177, 246-247, 266, 365; EX1008, 157-162), which include the user's custom alert settings (EX1006, 9-10; EX1009, 1-50) and the user-selected themes, skins, and behavior of the portlets (EX1004, 20, 27, 50-51, 152, 296; EX1005, 4 143-178; EX1006, 42); and (2) the user's devices (EX1004, 27, 287, 296-297; EX1005, 484-486; EX1006, 340-341, 354; EX1007, 240; EX1008, 2, 144). EX1003, ¶101.

As one example of the user preferences, the WebSphere references describe how the user can subscribe to receive an alert/notification when a certain event happens (e.g., when a stock reaches a user-set threshold) and how the apparatus (one or more servers) stores this subscription as part of the user's preferences. EX1006, 9-10; EX1009, 2, 4, 6, 19, 30, 40-50, 80.

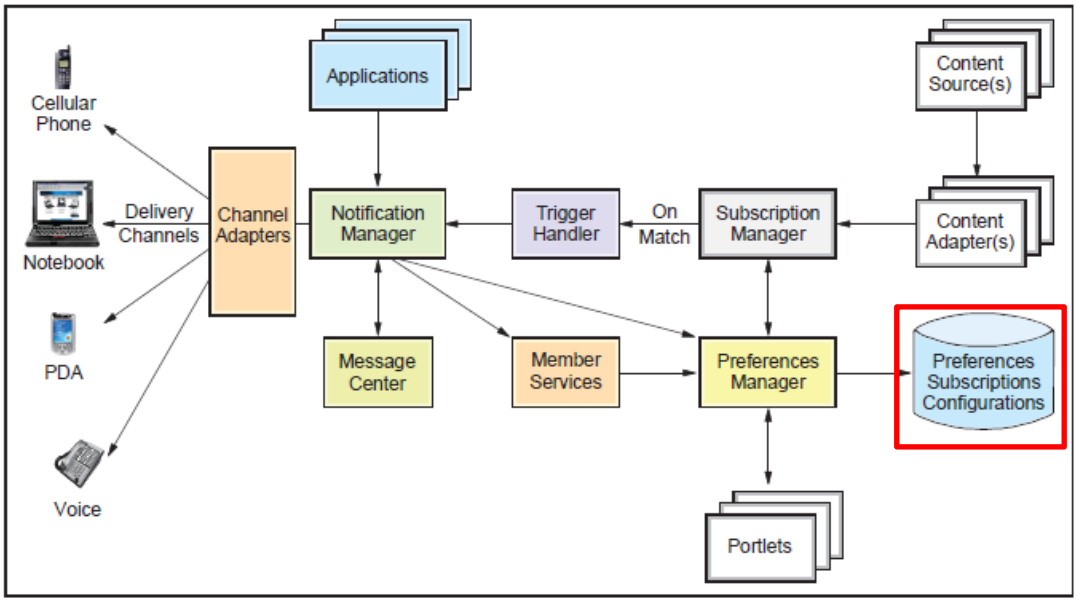


Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotation added). EX1003, ¶102.

As another example of user preferences, the WebSphere references describe how the user can select themes, which dictate "the overall look and feel of the portal," and skins, which dictate "the look and feel of each portlet." EX1004, 20, 61; *see also* EX1004, 58-64, 354, 424, 957-986; EX1005, 143-163, 242-243; EX1006, 5, 42, 48, 64-66; EX1009, 302. EX1003, ¶103.

The user's device information is collected and stored in at least two instances: during initial device enrollment and/or at the start of a new session. EX1004, 27; EX1005, 484-486; EX1006, 340-341, 354; EX1007, 240; EX1008, 144. "The first time the device connects to the Device Services … the enrollment server [] enrolls the device with the user." EX1006, 354. "During the collection of user information

… [t]he user's device is determined by information contained in the request header" and "is also stored in the session." EX1004, 27. EX1003, ¶104.

The WebSphere references also teach that the user profile identifies service support instructions that determine how the secure user-centric information behaves on the at least one user platform at least because a POSITA would have understood or found it obvious that such service support instructions are necessary to provide the WebSphere references' disclosed functionality allowing a user to "create a personalized device-independent 'desktop' with a consistent look and feel." EX1005, 4; *see also*, *e.g*., EX1004, 30, 48 ("Customization allows the user to organize the look and feel of the portal to suit their individual needs and preferences."), 50, 61, 118, 255, 296, 424, 962; EX1005, 7-8, 143-163, 242-243; EX1006, 42. EX1003, ¶105.

Indeed, the WebSphere references disclose that "[p]ortlets may need to behave differently based on the user" (EX1004, 296), e.g., based on "user attributes" (EX1004, 16, 133, 287, 296-297), and that the apparatus "takes [] information [about the user's choices and the user's device] and combines it to create a display that is appropriate for the device" (EX1004, 27). When developing Portal pages, "[r]endering of page components is done using JSPs, images, style sheets, and other resources." EX1004, 27; *see also id*., 512-513. When delivering the Portal pages and their secure user-centric information to the user device(s), the one or more servers

use transcoding technologies and markup languages to ensure the Portal page(s) display properly on the user's device(s). EX1004, 16, 37, 56, 125; EX1005, 475-491; EX1006, 5, 13-14, 91-94; EX1007, 243-244. Thus, the instructions needed to deliver information to the user so that the portlet behavior (e.g., look and feel) conforms to the user's preferences and their device(s), as taught by the WebSphere references, constitute service support instructions that determine how the secure user-centric information behaves on the at least one user platform. EX1003, ¶106.

g) <u>Element [1.7]</u>

[1.7] C) receiving configuration data indicating one or more user preferences regarding alerts transmitted via the first channel based on the user profile;

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶107.

The WebSphere references teach that the apparatus (one or more servers) is programmed to receive configuration data (e.g., subscription information) indicating one or more user preferences regarding alerts (e.g., preference for a stock price alert) transmitted via the first channel (e.g., message center portlet) based on the user profile. EX1006, 9-11; EX1009, 1-50, 80-81. EX1003, ¶108.

For example, the WebSphere references disclose that the apparatus (one or more servers) receives subscription information indicating that the user wishes to be alerted/notified when a particular event (i.e., a trigger) occurs, such as when a stock

shifts by more than five points or reaches a certain price. EX1006, 9-11; EX1009, 2-10, 20-25, 29-50. EX1003, ¶109.

Specifically, the Preferences Manager of the one or more servers "receives information from users … regarding subscriptions (which subscriptions are needed, the way they must be delivered, and all related parameters)." EX1009, 6.

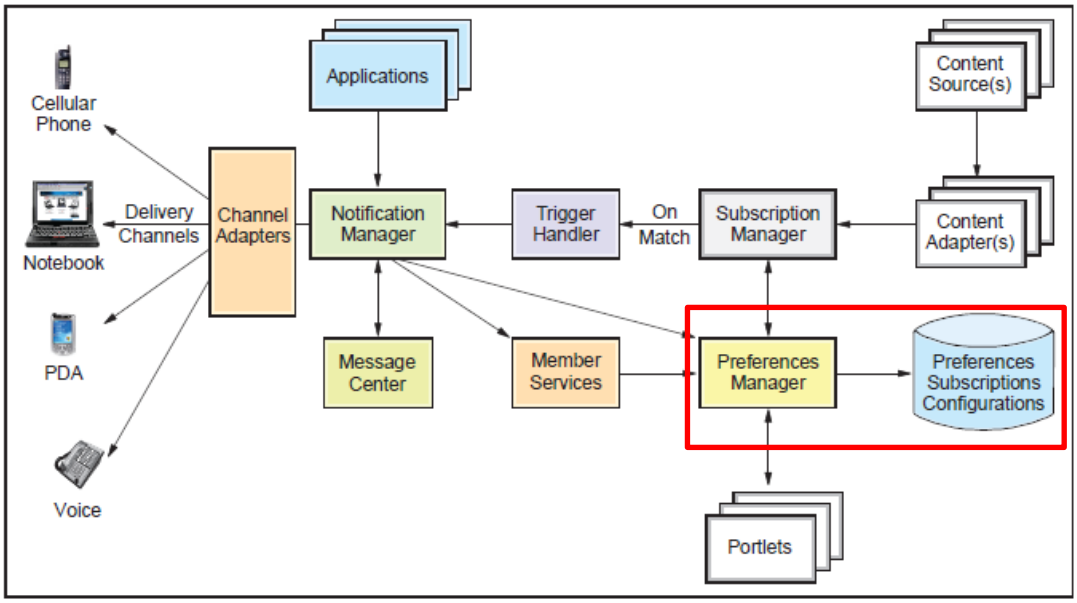


Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotation added). EX1003, ¶110.

As one example, the user can subscribe to receive an alert when a particular stock reaches a certain price, such as when it drops below $50 and/or increases above $100. EX1009, 41-50.

Intelligent Notification Stock Subscriptions

OK | Cancel | Delete subscription

Stock symbol:
CK

Condition:
Less than

Stock price(points):
50

Notification:
Once - Receive notification only the first time a match occurs.
Always - Receive notification every time a match occurs.

In the table below, choose whether you would like to receive notification through the first available delivery channel selected in the list or through all selected delivery channels in the list.
Send notification to:
Each selected delivery channel in order, until delivery is successful.
All of the selected delivery channels.
Default
blackberry
email
Edit the order of your delivery channels.

OK | Cancel | Delete subscription

Figure 1-31 Configure the stock subscription

EX1009, 44 (showing how to subscribe to an alert when the stock CK drops below $50).

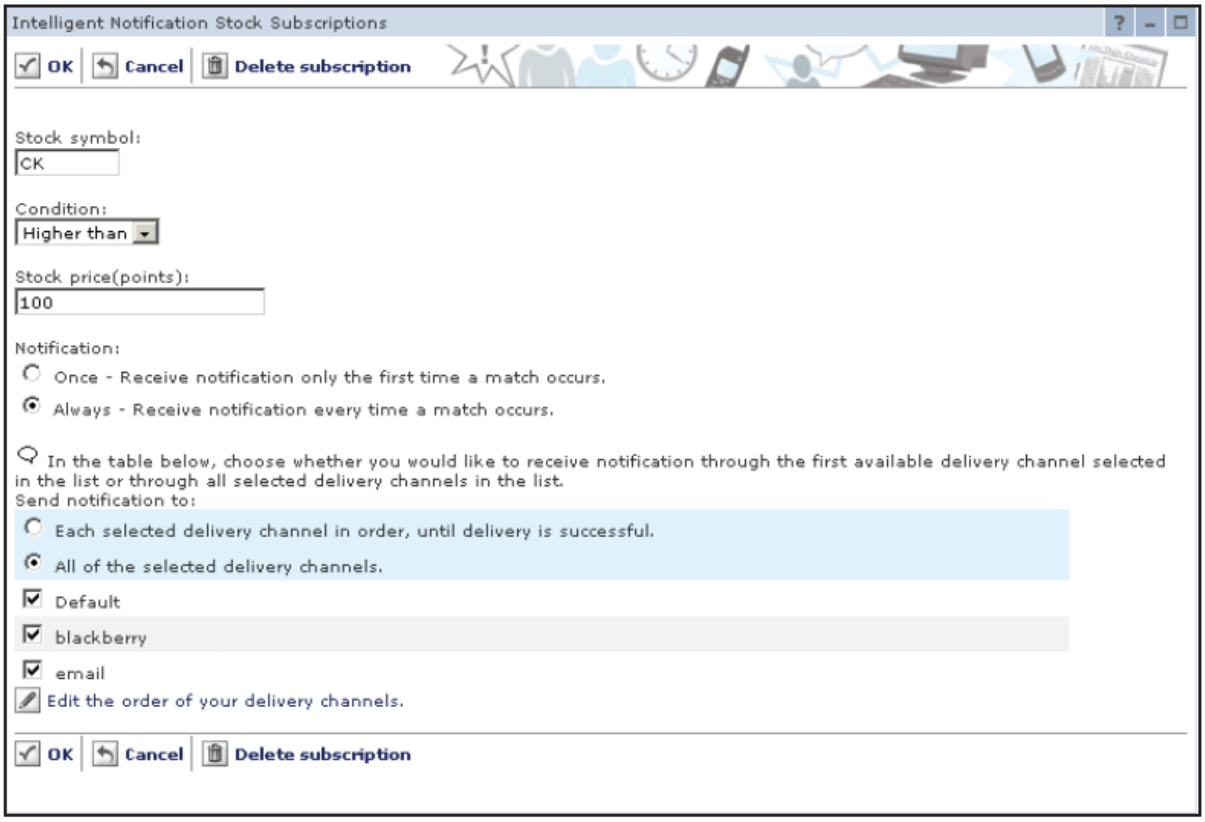


Figure 1-32 Configure the subscription

EX1009, 45 (showing how to subscribe to an alert when the stock CK rises above $100). EX1003, ¶111.

The subscription manager monitors the stock price information and "fires a trigger" when the stock information "matches … the subscription criteria." EX1009, 4. The trigger handle "notifies the appropriate user via the Notification Manager." EX1009, 8. The Notification Manager "dispatches [the] notification[]" (EX1009, 7) through "the designated delivery channels" (EX1009, 8), such as through the first channel (e.g., the message center portlet) (EX1009, 2-3, 7, 9, 12, 21-22, 25, 41, 47-49).

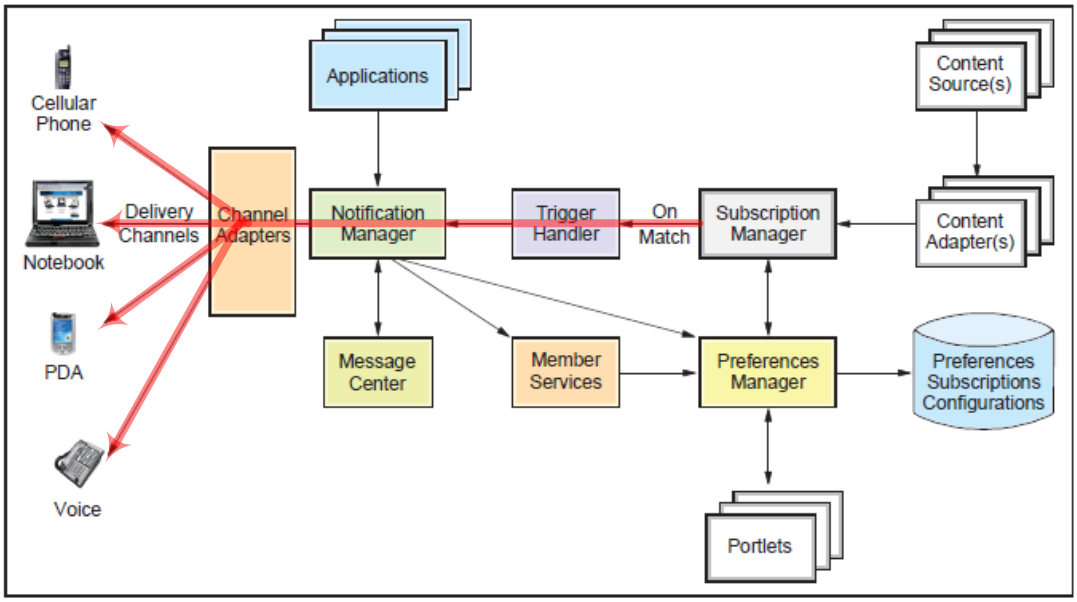


Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotations added).

Figure 1-35 Stock notification received

EX1009, 48 (showing a stock notification received in the message center portlet).

EX1003, ¶112.

h) Element [1.8]

[1.8] D) receiving session data indicating a current state of at least one external device of the user;

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references and Austin-Lane disclose or suggest it. EX1003, ¶113.

The WebSphere references teach that the apparatus (one or more servers) is programmed to receive session data (at least as defined by the '948 patent's specification[7]) indicating a current state of at least one external device[8] of the user at least because they disclose receiving and storing session information indicating whether the user is logged into their account (online or offline) on their device(s), including indicating when the user starts or ends a portlet session on their device(s). EX1003, ¶114.

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[7] The '948 patent provides that session data indicates whether the user has an active session (i.e., whether they are online or offline). *See*, *e.g.*, EX1001, 20:60-21:15, 23:20-43.

[8] The '948 patent refers to user devices, user platforms, and clients synonymously. *See*, *e.g.*, EX1001, 8:25-26 ("[u]ser devices 118 serve as a user platform operated by a user 116"), 8:40-41 ("user devices or 'platforms' (clients)").

For example, the apparatus (one or more servers) receives an indication of when the user logs into and out of their account and/or when the user starts and stops their portlet session via a PortletSessionListener. EX1004, 124-125, 134-137, 139-140, 156-157, 278, 285; EX1005, 249-250, 253-254, 263-264. A Portlet Container (part of the PortletSessionListener) creates the PortletSession when the user logs in (e.g., enters their username and password) (*e.g.*, EX1004, 468, 643, 665, 726; EX1005, 228; EX1006, 30-33, 309-311; EX1007, 321; EX1009, 347) and ends the session when the user logs out ("selects the Log Off button") (EX1004, 136). *E.g.*, EX1004, 124, 134-136, 285.

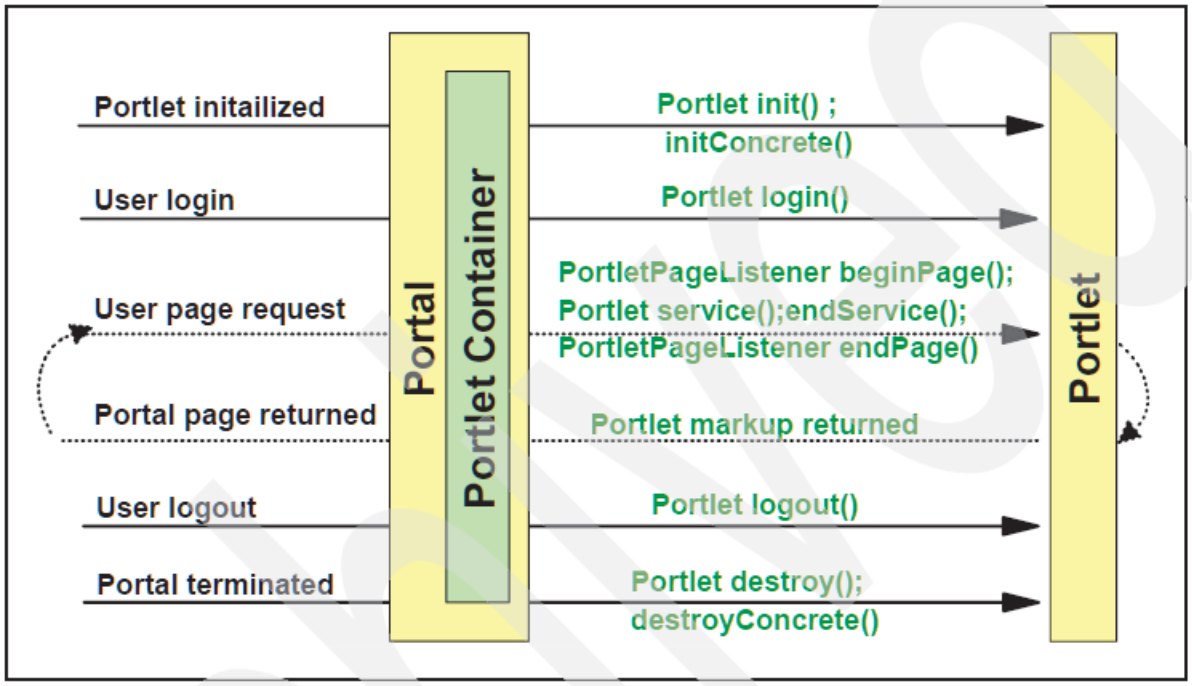

Figure 4-7 Portlet life cycle

EX1004, 135. EX1003, ¶115.

The apparatus (one or more servers) also has "online awareness" (EX1005, 18-19) of the user's status on at least an instant messaging portlet, and can "track[] the user's online activities" (EX1005, 164). The user also can set their status to be online or offline and can see other users' online/offline status on at least an instant messaging portlet. EX1005, 228, 233-234, 264; EX1006, 28-29, 382, 384. EX1003, ¶116.

The apparatus (one or more servers) also receives an indication of when the user logs into their account via login tickets/tokens/certificates (e.g., LTPA tokens, X.509 certificates). EX1004, 630, 638-640, 899-900; EX1005, 270, 365-401. EX1003, ¶117.

Austin-Lane also discloses receiving session data (presence information) to determine a notification method based on this session data. EX1010, [0019-21], [0024], [0027-28], [0034-35], [0046], [0062], [0066-67]; *see also id*., [0006-9], [0023], [0029], [0031], [0039], [0041], [0045], [0048], [0055], [0079]. The presence information may be "an online presence" of a user (*e.g*., EX1010, [0020], [0027], [0035]) that is based on information received from an online service, as was known in the art. EX1010, [0034-35], [0066]; EX1038, [0017-19], [0028], [0045-46]. EX1003, ¶118.

When incorporating Austin-Lane's teachings to determine the notification method based on session data (*see* element [1.10] below), a POSITA would have

implemented the combination to receive session data, as taught by the WebSphere references and Austin-Lane's complementary disclosures. Receipt of this session data facilitates Austin-Lane's session-based notification determination (i.e., a determination based on session data cannot be made without the session data). EX1003, ¶119

i) <u>Element [1.9]</u>

[1.9] E) monitoring at least the first channel information so as to determine one or more events, conditions, logical workflows, discrete information values or signal data, based on at least one threshold condition or parameter relating to the first channel information and determined based on the user preferences indicated by the configuration data; and if[9] the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E):

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest it. EX1003, ¶120.

The WebSphere references disclose that the apparatus (one or more servers) is programmed to monitor at least the first channel information (the stock price information) so as to determine one or more events, conditions, logical workflows,

[9] Because of this conditional "if," the subsequent claim elements ([1.10-1.12]) are optional and not entitled to patentable weight. For completeness, however, Petitioner shows how the WebSphere+Austin-Lane combination teaches these optional elements.

discrete information values or signal data based on at least one threshold condition or parameter relating to the first channel information and determined based on the user preferences indicated by the configuration data (e.g., whether the stock price has cross a user-set threshold). EX1006, 9-10; EX1009, 2-4, 7-8, 40-41, 46-50. EX1003, ¶121.

As explained above for elements [1.5] and [1.7], the subscription manager receives information of interest to the user (e.g., stock price information) from one or more information sources (*e.g.*, EX1009, 3-5, 79-85), monitors this information and "determines if that information meets the criteria established by the subscriber(s)" (EX1009, 10), and "fires a trigger" when the information "matches … the subscription criteria" (EX1009, 4). *See also id.*, 1-50, 79-141; EX1006, 9-11. For example, the "stock price information is stored in an XML file" that is sent "to the Subscription Manager," which then sends a notification message if the stock price matches the user-set threshold (e.g., "[i]f the stock price is less than $50" or "is higher than $100"). EX1009, 41. EX1003, ¶122.

j) <u>Element [1.10]</u>

[1.10] F) determining a notification method by which to provide at least one alert on the at least one external device based on the current state of the at least one external device indicated by the session data;

The WebSphere+Austin-Lane combination teaches this element at least because Austin-Lane discloses or suggests it. EX1003, ¶123.

The WebSphere references disclose several notification methods, "including Lotus Sametime, SMTP e-mail, Short Message Service (SMS), voice, … the Message Center portlet … or a custom-defined channel," but do not expressly disclose determining a notification method based on the current state of the at least one external device indicated by the session data. EX1006, 10; *see also* EX1009, 2, 7-10, 12, 20-25, 32, 40-50, 58, 60, 80. EX1003, ¶124.

As explained above in Section VII.C, however, Austin-Lane discloses this concept of determining a notification method based on the current state of the at least one external device indicated by the session data. EX1003, ¶125.

Specifically, Austin-Lane teaches determining a notification method (a "delivery mechanism" (EX1010, *passim*), which can include: (1) the user device(s) to send the notification to (e.g., phone, PDA, notebook computer, desktop computer) (*e.g.*, EX1010, [0005], [0029], [0032], [0046], [0061], FIG. 1); (2), the communication protocol to use to send the notification, i.e., how to send the notification (e.g., SMTP (for email), SMS (for texts), HTTP (for web browsers)) (*e.g.*, EX1010, [0004], [0033], [0048]); and (3) the type of alert to provide, i.e., how to present the notification, (e.g., text, an icon, a pop-up window, a video, an email, an audible or tactile alarm) (*e.g.*, EX1010, [0039], [0046], [0079])), based on the current state of the at least one external device indicated by the session data ("presence information" (EX1010, *passim*), which may include whether and on

which device(s) the user is online and/or whether and on which applications the user has an active session (*e.g.*, EX1010, [0046], [0066-67], [0074-77])). *See also* EX1010, [0006-9], [0019], [0021], [0023-24], [0026-28], [0031-32], [0035], [0047-48], [0055], [0064-65], [0071-73], FIGS. 2, 7-9. For example, if "the presence information [] indicate[s] that the user 305 presently is online using notebook computer 310*d* … and that the user 305 has an active IM connection … the notification delivery service 352 may provide the notification to the user 305 using an instant message to the notebook computer 310*d*." EX1010, [0046]. EX1003, ¶126.

Austin-Lane also explains that determining the notification method based on the presence information provides a benefit; it ensures the user receives the alert promptly or "without significant delay." EX1010, [0009], [0019], [0023], [0039], [0046]. EX1003, ¶127.

As explained above in Section VII.C, a POSITA would have been motivated to combine the WebSphere references' teachings on the WebSphere system, including Portal and Everyplace Access, with Austin-Lane's teachings to determine a notification method for the alert based on the user's presence information to provide the alert to the user "without significant delay." EX1010, [0046]; *supra* Section VII.C. EX1003, ¶128. As also explained above in Section VII.C, a POSITA would have reasonably expected to succeed in modifying the WebSphere system to include Austin-Lane's teachings to determine the notification method based on

session information that the WebSphere references' disclosed system already collects at least because this would have required only minor software changes that a POSITA would have reasonably expected to succeed in achieving. *Supra* Section VII.C. EX1003, ¶129.

k) <u>Element [1.11]</u>

[1.11] G) generating notification data according to the determined notification method, wherein the notification data is configured to cause the at least one external device to provide the at least one alert on the at least one external device; and

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references and Austin-Lane disclose or suggest it. EX1003, ¶130.

The WebSphere references teach that the apparatus (one or more servers) is programmed to generate notification data according to the determined notification method at least because they disclose generating and formatting the notification according to the determined delivery channels (e.g., instant message, e-mail, SMS, voice, message in the Message Center portlet or a custom-defined channel, etc.). EX1006, 10; EX1009, 2-3, 7-14, 20-25, 32, 40-50, 58, 60, 80-82, 147. For example, the WebSphere references disclose that the trigger handler "composes [the] notification" (EX1009, 81; *see also id*., 8, 82), the Notification Manager determines the delivery channels for the notification (EX1009, 8) and "is responsible for

message formatting" (EX1006, 10), and that one or more channel adapters "transcode those messages into the proper formats for the designated delivery channels" (EX1009, 8; *see also id*., 3, 7, 9-14, 147).

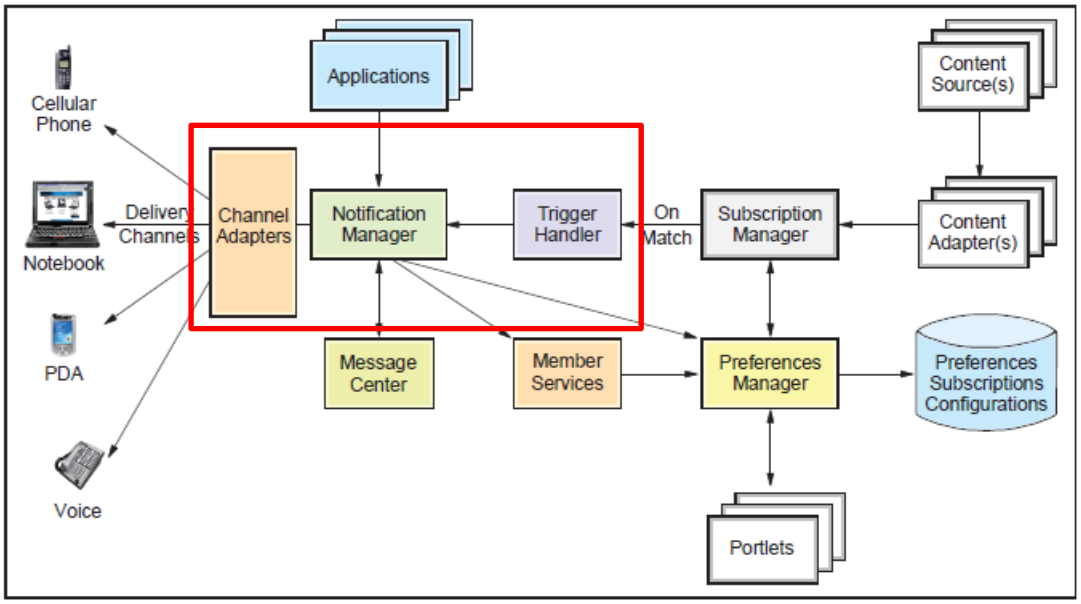

Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotation added). EX1003, ¶131.

Austin-Lane similarly teaches generating notification data according to the determined notification method. EX1010, [0031], [0039], [0041], [0045-46], [0079]; *supra* Section VII.B. E.g., the "notification generation service [] generates notifications based on the … notification delivery service [] that delivers the notifications to the user [] using one or more of the delivery mechanisms." EX1010, [0041]. These delivery mechanisms "format the notification using a standard protocol, such as, … (SGML), … (XML), … (HTML), … (DOM) …" (EX1010, [0031]) and deliver the alert using a networking protocol, such as "SMS," "WAP,"

"TCP," "IP," (EX1010, [0048]), etc. Austin-Lane also discloses "perform[ing] sorting, prioritizing, or other types of organizational processing on the notification so that the notification is delivered to an optimal delivery mechanism in a desired fashion." EX1010, [0045]. EX1003, ¶132

Thus, when improved with Austin-Lane's session data-based notification method (*see* element [1.10] above), the combined system would generate notification data according to the determined notification method, as taught by the WebSphere references and Austin-Lane's complementary disclosures. A POSITA would have understood that the notification data needs to be generated according to the determined notification method to ensure successful delivery and proper presentation of the notification/alert. A POSITA would have understood and/or at least found it obvious that notification data would depend on the type of alert and the communication protocol used to send the alert. EX1003, ¶133. For example, a POSITA would have understood or at least found it obvious that the content and/or format of the notification data for a visual alert is different than for an audible alert, and that even for visual alerts, the notification data is different for text (e.g., instant message) than graphics (e.g., flashing icon). *See*, *e.g.*, EX1009, 48-50 (showing different types of alerts); EX1010, [0039], [0079] (describing a variety of alerts, including "instant message, pop-up window, icon, and or [sic] audible or tactile alarm." Further, a POSITA would have understood that the content and/or format of

the notification data would depend on the communication protocol being used (e.g., HTTP vs. SMS vs. SMTP) and/or the markup language being used (e.g., HTML vs. XML vs. RFC822 email headers). *See*, *e.g*., EX1006, 10; EX1009, 2, 7-10, 12, 20-25, 32, 40-50, 58, 60, 80 (describing different communication protocols); EX1010, [0004], [0031], [0033], [0048] (describing different communication protocols and markup languages). EX1003, ¶134.

The WebSphere references also teach that the notification data is configured to cause the at least one external device to provide the at least one alert on the at least one external device at least because the alert is provided on the external device. EX1006, 9-10; EX1009, 2, 4, 7-14, 48-50, 77-78, 81. For example, the channel adapter "delivers notifications using different types of channels." EX1009, 2; *see also id*., 3, 7-14, 20-25, 29-30, 40-50.

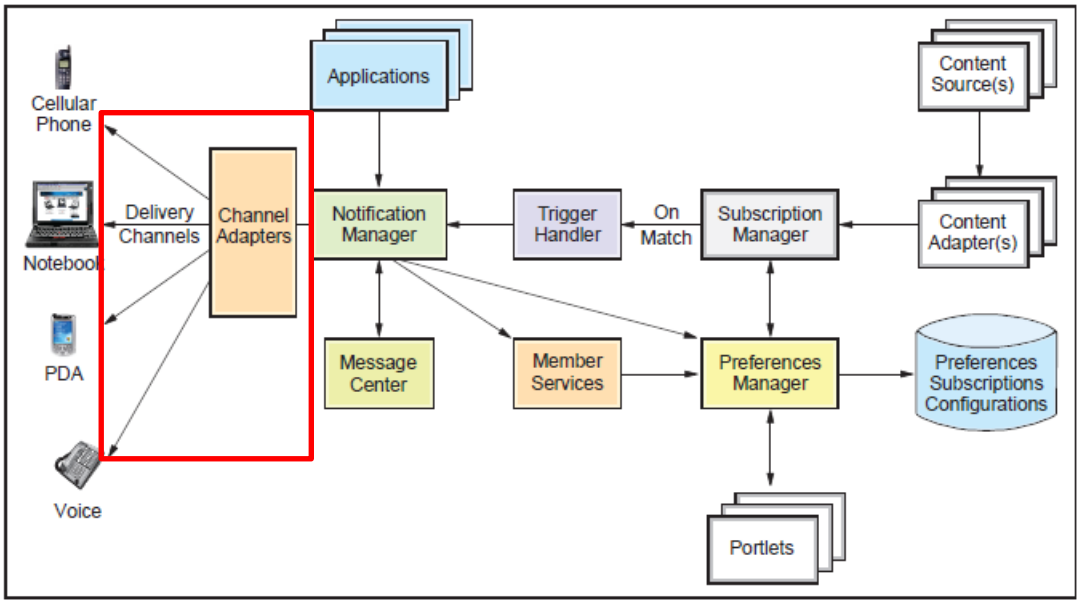

Figure 1-1 Intelligent Notification Services architecture

EX1009, 3 (red annotation added). Then, the device(s) that receive the notification provide the alert, such as an alert that a stock price has crossed a user-set threshold. *See*, *e.g.*, EX1009, 49-50.

Figure 1-35 Stock notification received

EX1009, 48 (red annotation added) (showing a stock price alert being displayed within the WebSphere application).

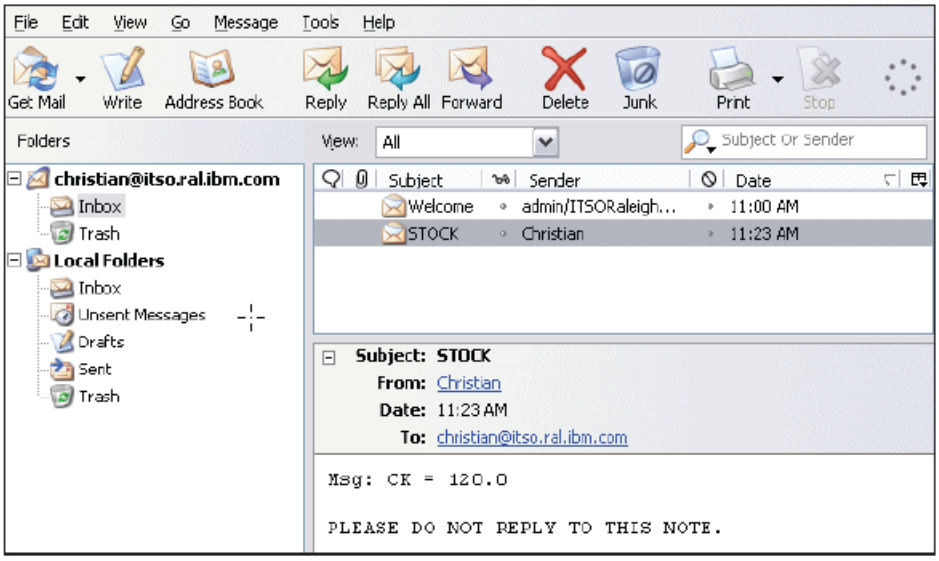

Figure 1-37 Stock notification to e-mail account

EX1009, 49 (showing a stock price alert being displayed within the user's email).

Figure 1-38 Stock notification in the BlackBerry emulator

EX1009, 50 (showing a stock price alert being displayed on a user's Blackberry device). EX1003, ¶135.

l) <u>Element [1.12]</u>

[1.12] H) controlling the at least one communication interface to transmit the notification data to the at least one external device via the first channel without being requested by the user, wherein the transmission of the notification data to

the at least one external device is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the at least one user platform.

The WebSphere+Austin-Lane combination teaches this element at least because the WebSphere references disclose or suggest this element. EX1003, ¶136.

The WebSphere references disclose or suggest that the apparatus (one or more servers) is programmed to control the at least one communication interface to transmit the notification data to at least one external device from which session data is obtained, via the first channel without being requested by the user at least because the WebSphere references disclose sending the notification using the appropriate channel adapter (e.g., Message Center, Lotus Sametime instant message, wireless application protocol (WAP), SMTP email, voice, etc.) whenever the first channel information (stock price) crosses the threshold (e.g., $50), without needing prompting from the user each time the stock price crosses the threshold. EX1006, 10; EX1009, 2, 4, 7-12, 40-50. "The Intelligent Notification Services … proactively notif[ies] mobile workers (based on their subscription to particular notification applications) of important information and events." EX1006, 9. "If a match occurs, [the Subscription Manager] calls the trigger handler" (EX1009, 4), which "notifies the appropriate user via the Notification Manager" (EX1009, 8). For example, "[i]f the stock price is less than $50" and/or "higher than $100," "a notification message is sent." EX1009, 41; *see also* EX1006, 10 ("a subscriber could be notified when

their favorite stock shifted five points"). This is analogous to the stock alert example described by the '948 patent itself, where a user sets up an alert to occur when the share price of a stock drops below $9.23. *See* EX1001, 25:29-26:16, FIGS. 14-17; *supra* Section V.A. EX1003, ¶137.

As explained above for element [1.2], the WebSphere references disclose or suggest using the at least one communication interface to transmit information (including alerts/notifications). *Supra* Section VII.C.1.b. EX1003, ¶138.

And, as explained above for element [1.5], the user receives (and thus the apparatus transmits to the user device(s)) the user-centric information (which includes the notification/alerts) based on user access rights (roles/permissions/privileges) (EX1004, 5, 11, 15, 19-20, 39; EX1005, 8, 191-193) and/or security protocols (encryption protocols (e.g., SSL) and/or user authorization protocols (e.g., SSO)) (EX1004, 5, 7, 11, 27, 33, 51, 76, 134-137, 630, 642, 899-900; EX1005, 5, 8, 15, 195-196, 225-226, 270, 380-401; EX1006, 5, 22, 30-33, 310-311, 315-337, 378-383; EX1007, 28, 182-187, 320-322, 332, 342; EX1008, 70, 162, 182-184, 234; EX1009, 277, 289-290, 314, 324-355) respectively associated with the plurality of channels. *Supra* Section VII.C.1.e; *see also supra* Section VII.C.1.h (describing tickets/tokens/certificates such as LTPA tokens and X.509 certificates). As also explained above for element [1.5], the notifications are transmitted based on information access rights and/or security protocols respectively associated with the

plurality of channels for at least the additional reasons that, for at least some channels (e.g., the Sametime messaging portlet), the user's access rights are channel-specific. For example, to access the Sametime messaging portlet, the user must log in to the Sametime messaging portlet using a username and password that is specific to that portlet. *Supra* Section VII.C.1.e; EX1006, 378-383. EX1003, ¶139.

A POSITA also would have understood or at least found it obvious that the notification data is transmitted to at least one external device from which session data is received, based on access rights and/or security protocols respectively associated with the user and the user platform (e.g., via authenticating the user when they log in to their account) at least because the system delivers notifications for only those "users who have subscribed to that information" (EX1009, 2) and only those users that are "in an Intelligent Notification Services user group" after they log in to their account (EX1009, 15; *see also id*., 26-28). Thus, unauthorized users that do not have an account, or, authorized users that have not subscribed to the notification, do not have access to, and do not receive, the notification. EX1003, ¶140.

A POSITA also would have understood or at least found it obvious that the combination teaches that the notification data is transmitted to at least one external device from which session data is received, based on access rights and/or security protocols respectively associated with the at least one external device at least

because, as explained above for element [1.10], the combination teaches transmitting the notification to the device(s) on which the user is online and/or to the application on the device(s) on which the user has an active session. *Supra* Sections VII.C.1.h, VII.C.1.j; EX1010, [0046], [0066-67], [0074-77]). A POSITA would have understood that the notification must be sent based on the access rights respectively associated with the at least one external device at least because the user would have had to log in to each device that is set to receive the notification via the determined notification (i.e., each device that is online and/or has an active session). *Supra* Section VII.C.1.a. Moreover, a POSITA would have understood or at least found it obvious that that the notification must be sent based on security protocols respectively associated with the at least one external device at least because different security protocols would be used depending on the type of device(s) set to receive the notification. For example, a POSITA would have understood or found it obvious that the security protocols for an SMS message to a mobile phone would be different than for SMTP emails to a notebook computer or a voice message to a landline phone. EX1009, 3, 7-14.

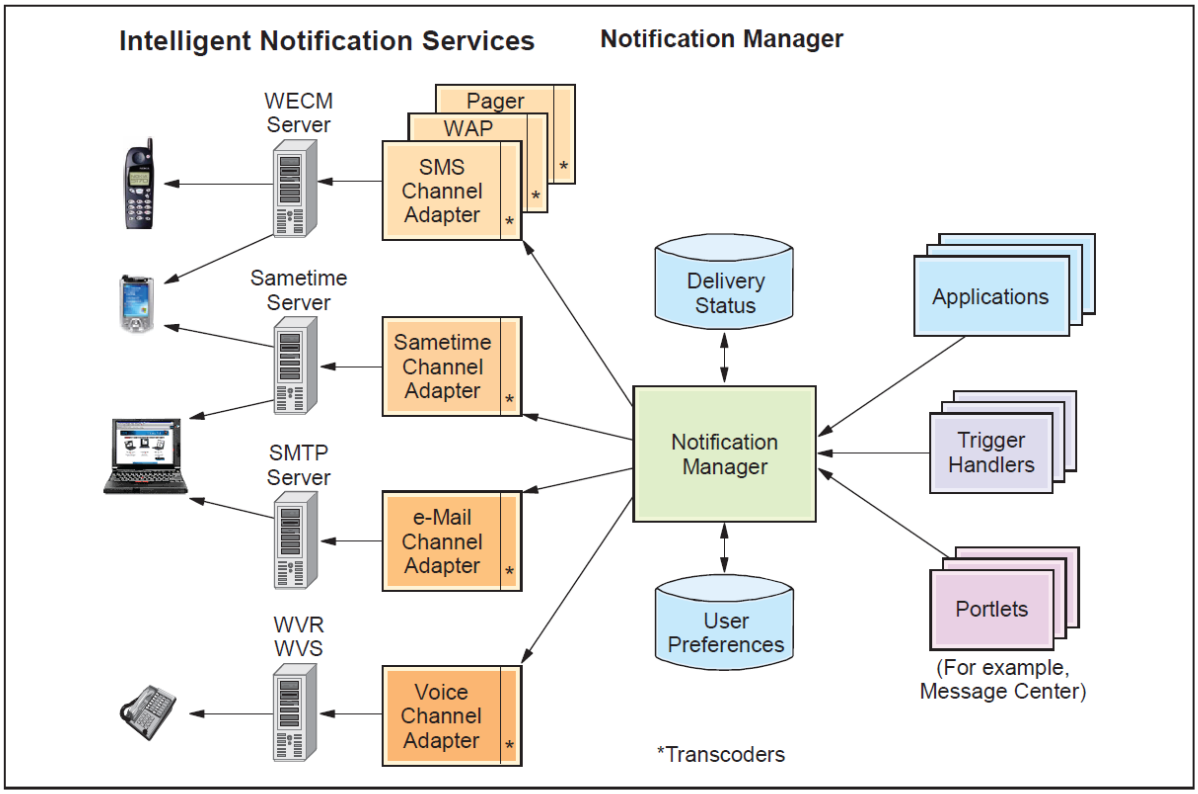

Figure 1-4 Components of the Notification Manager

EX1009, 7 (showing some of the different delivery channels). EX1003, ¶141.

To the extent the claim requires the alert be provided within (for example) the stock portlet (which Petitioner does not acquiesce is appropriate), it would have been obvious to a POSITA to provide the alert within the stock portlet instead of and/or in addition to the notification message center portlet, especially if the presence information indicates that the user is currently using the stock portlet. This would increase the chances the user notices the alert sooner. EX1003, ¶142.

2. Claim 2

[2.1] The apparatus of claim 1, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor performs H).

As explained above for claim elements [1.9-1.12], the WebSphere references disclose or suggest that the at least one processor performs H) (transmits the notification) if it determines that the one or more events, conditions, etc. have occurred (e.g., if the stock price has cross the user-set threshold). *Supra* Sections VII.C.1.i-l. EX1003, ¶143.

3. Claim 3

[3.1] The apparatus of claim 1, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor controls the at least one memory so as to store trigger information relating to the one or more determined events, conditions, logical workflows, discrete information values or signal data.

The WebSphere+Austin-Lane combination teaches this claim at least because the WebSphere references disclose or suggest it. The WebSphere references disclose that "the Subscription Manager … issues a message to the Notification Manager for further processing" if the "information meets the criteria established by the subscriber(s)." EX1006, 10. Specifically, "the Subscription Manager fires a trigger which handles the match and notifies the user about the event using the Notification Manager." EX1009, 4. As explained above for element [1.11], the

trigger handler "composes [the] notification" (EX1009, 81; *see also id*., 8, 82), the Notification Manager determines the delivery channels for the notification (EX1009, 8) and "is responsible for message formatting" (EX1006, 10), and the one or more channel adapters "transcode those messages into the proper formats for the designated delivery channels" (EX1009, 8; *see also id*., 3, 7, 9-14, 147). A POSITA would have would have understood or at least have found it obvious that the processor would store trigger information (e.g., the triggering stock price, the user(s) to send the alert to) in memory because it would have to in order to perform the aforementioned actions—message creation, message formatting, transcoding, notification method determination. Otherwise, the trigger information would be lost, and the processor would not be able to complete delivery of the notification/alert. Moreover, if the underlying channel information that triggered the alert (the triggering stock price) is not stored in memory, it too would be lost, contrary to the WebSphere references' express teaching to display the stock price information to the user as part of the alert. Thus, a POSITA would have understood that in order to successfully complete delivery of the notification and provide the stock price information to the user, as taught by the WebSphere references, the processor would have to store the trigger information in memory, at least temporarily. EX1009, 48-50. EX1003, ¶144.

4. Claim 4

> [4.1] The apparatus of claim 3, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor further performs H).

See claim 2, which recites the same subject matter. *Supra* Sections VII.C.1.i-l, VII.C.2. EX1003, ¶145.

5. Claim 5

> [5.1] The apparatus of claim 1, wherein the first channel information includes at least one of: text information; … content associated with an executing computer application; … instant messaging/SMS information; … financial services information; … email; and address book information.

The WebSphere+Austin-Lane combination teaches this claim at least because the WebSphere references expressly disclose at least one of the claim-recited information types, including, *inter alia*, text information (numerical stock price), financial services information (stock information), and content associated with an executing computer application (stock information associated with a notification message center portlet). EX1004, 18, 48-49, 152, 989, 1000; EX1005, 241-242, 277; EX1006, 10; EX1007, 283-293, 308-324; EX1009, 6, 30, 40-50.

Figure 9-35 Portlet view after applying the annotator

EX1007, 287 (showing stock price information displayed within a stock portlet); *see also* EX1007, 319).

Figure 1-36 Stock notification details

EX1009, 48 (showing stock price information displayed within the notification message center portlet). EX1003, ¶146.

6. <u>Claim 6</u>

[6.1]. The apparatus of claim 1, wherein the at least one threshold condition or parameter includes a numerical limit or a trend.

The WebSphere+Austin-Lane combination teaches this claim at least because, as explained above for element [1.7], the WebSphere references expressly disclose that the at least one threshold condition includes a numerical limit or a trend, including when a stock "shift[s] five points," (EX1006, 10), "is less than $50," and/or "is higher than $100" (EX1009, 41). *Supra* Section VII.C.1.g. EX1003, ¶147.

7. Claim 7

[7.1] The apparatus of claim 1, wherein E) comprises: E1) making a comparison of the monitored first channel information and the at least one threshold condition or parameter based at least in part on at least one criterion for the comparison; and E2) establishing a trigger, based at least in part on E1), if the at least one criterion is met.

The WebSphere+Austin-Lane combination teaches this claim at least because, as explained above for element [1.9], the WebSphere references disclose or suggest comparing the monitored first channel information (stock price information) to a threshold condition or parameter (e.g., user-set threshold price), and "fir[ing] a trigger" (EX1009, 4) if the stock information matches the threshold condition (e.g. the user-set stock price). EX1009, 3-4, 7-8, 40-50, 81; *supra* Section VII.C.1.i. EX1003, ¶148.

8. Claim 10

[10.1] The apparatus of claim 1, wherein the at least one processor performs H), and wherein the at least one alert includes at least one of: at least one visual alert; at least one auditory alert; at least one email message; and at least one SMS text message.

As explained above for claim elements [1.9-1.12], the WebSphere+Austin-Lane combination teaches that the processor performs H) (transmits the notification). *Supra* Sections VII.C.1.i-l. And, as also explained above for element [1.12] and claim 5, the WebSphere references also disclose that the alert includes a

visual alert, an email message, and/or a SMS text message. EX1006, 10; EX1009, 2, 4, 7-12, 40-50; *supra* Sections VII.C.1.l, VII.C.5. EX1003, ¶149.

9. Claim 11

[11.1] The apparatus of claim 1, wherein the at least one processor performs H), and wherein the at least one alert includes activation of at least one channel of the plurality of channels.

As explained above for claim elements [1.9-1.12], the WebSphere+Austin-Lane combination teaches that the processor performs H) (transmits the notification). *Supra* Sections VII.C.1.i-l. The WebSphere references also teach that the alert includes activation of at least one channel. *E.g.*, EX1006, 9-10; EX1009, 9-10, 48-50, 77-78. For example, the message center portlet is activated by displaying the stock alert in purple highlighting:

Figure 1-35 Stock notification received

EX1009, 48 (red annotation added). As another example, an email channel is activated to display the email alert:

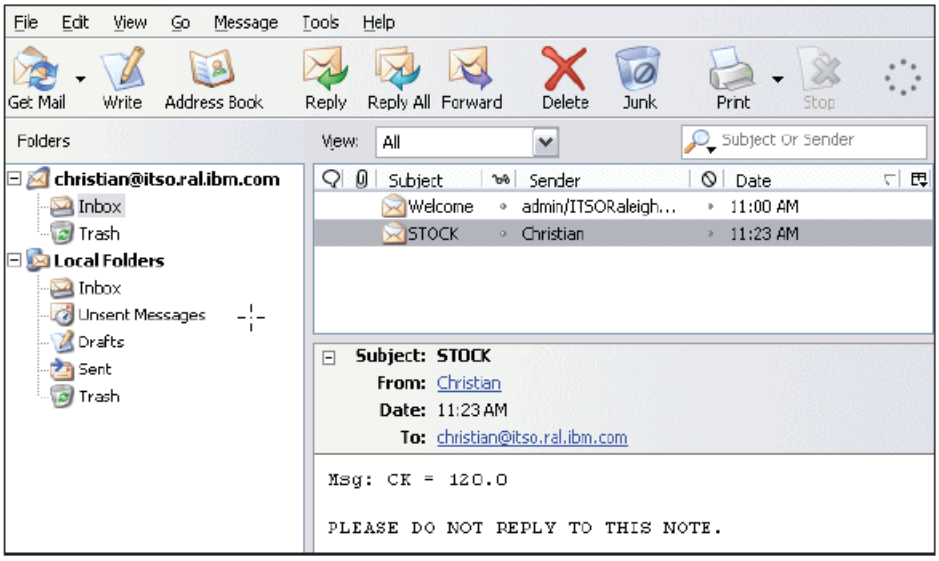

Figure 1-37 Stock notification to e-mail account

EX1009, 49. As another example, an SMS channel is activated to display the alert:

Figure 1-38 Stock notification in the BlackBerry emulator

EX1009, 50. EX1003, ¶150.

10. <u>Claim 13</u>

[13.1] The apparatus of claim 1, wherein the at least one processor performs H), and wherein: H) comprises transmitting the notification data so as to generate the at least one alert on at least one external device; the at least one processor further provides the at least some of the secure user-centric information by: I) controlling the at least one communication interface so as to transmit to the at

> least one external device channel information relating to at least one authorized channel of the plurality of authorized channels implemented in A); and the notification data transmitted in H) causes an appearance of the at least one authorized channel, as represented on the at least one external device, to change so as to generate the at least one alert on the at least one external device.

The WebSphere+Austin-Lane combination teaches this claim at least because, as explained above for claim elements [1.5] and [1.11-12], the combination teaches that the processor controls the at least one communication interface to transmit the notification data, including the channel information (e.g., stock price information). *Supra* Sections VII.C.1.e, VII.C.1.k-l. And, as explained above for claim 11, the notification data causes the external device to change the appearance of the at least one authorized channel so as to generate the at least one alert on the at least one external device (e.g., the message center portlet displays the stock alert as text with purple highlighting). *Supra* Section VII.C.9.

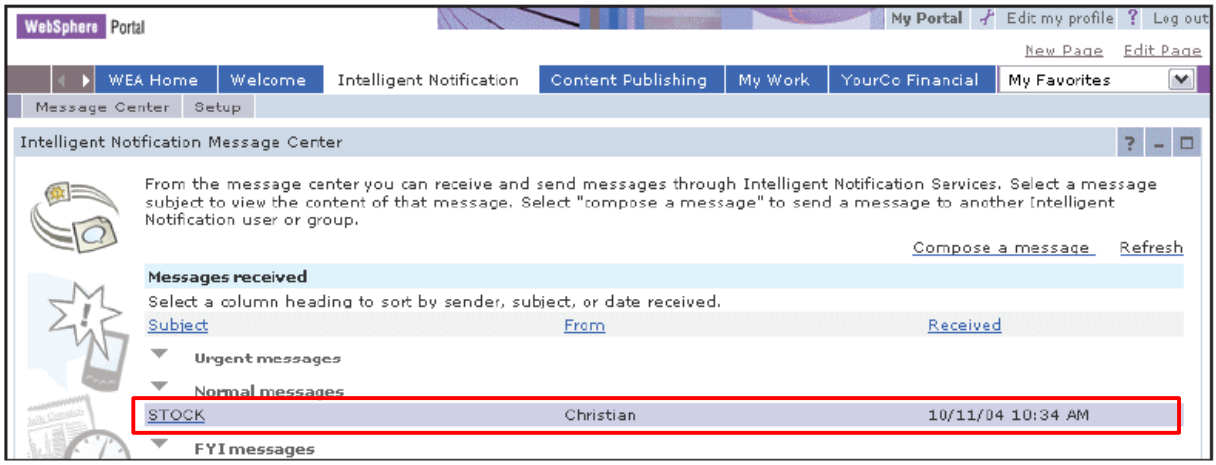

Figure 1-35 Stock notification received

EX1009, 48 (red annotation added) (showing receipt of an alert/notification within the message center portlet).

6. You can select the new message to see the details (as shown in Figure 1-36).

Figure 1-36 Stock notification details

EX1009, 48 (selecting the stock alert shows the stock price). EX1003, ¶151.

11. <u>Claim 18</u>

[18.1] The apparatus of claim 1, wherein the at least one processor performs H), and wherein in H), the at least one external device includes at least one of a mobile device, a television, and a Blu-ray player.

The WebSphere+Austin-Lane combination teaches this claim at least because the WebSphere references expressly disclose that the external device on which the alert appears includes a mobile device (e.g., cellular phone, notebook, PDA). EX1006, 2-4; 1009, 3, 7, 20.

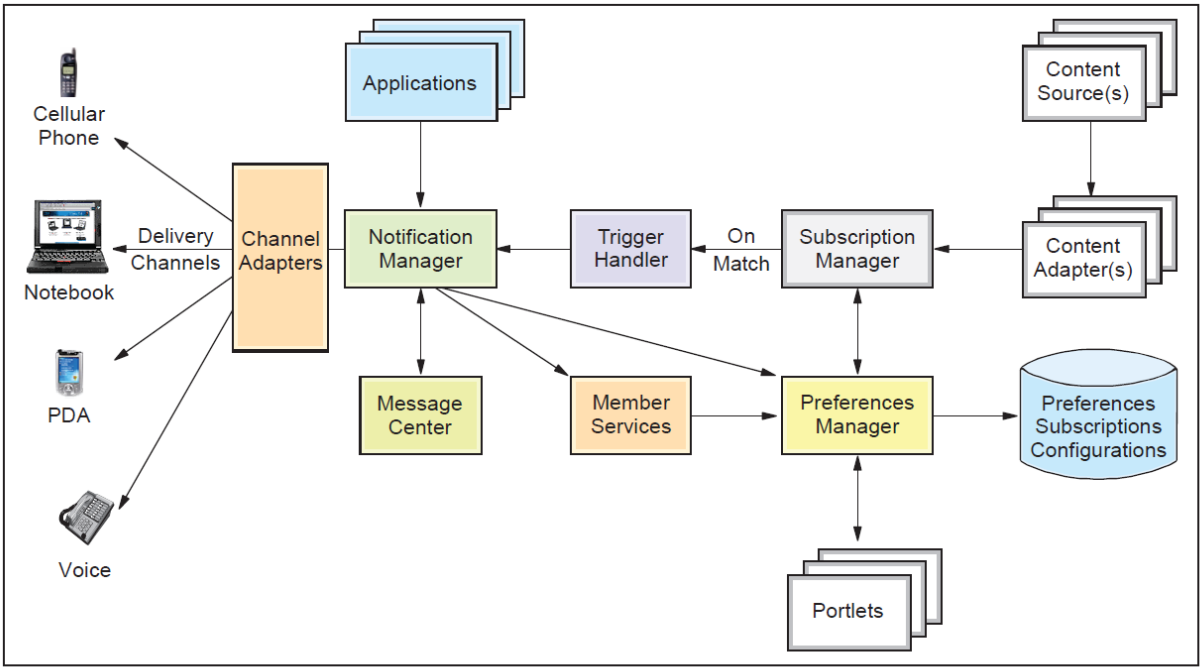

Figure 1-1 Intelligent Notification Services architecture

EX1009, 3. EX1003, ¶152.

12. <u>Claim 19</u>

[19.1] The apparatus of claim 1, wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by: I) controlling the at least one communication interface to transmit at least some of the first channel information to the at least one user platform.

As explained above for claim elements [1.5], [1.9], and [1.12], the WebSphere+Austin-Lane combination teaches that the processor provides and evaluates at least some of the secure-user centric information (the stock price information) by controlling the at least one communication interface to transmit at least some of the stock price information to the user platform, through the stock

portlet and/or the message center portlet. *Supra* Sections VII.C.1.e, VII.C.1.i, VII.C.1.l. EX1003, ¶153.

13. Claim 23

> [23.1] The apparatus of claim 1, wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by: I) authenticating the user and the at least one user platform to receive at least the first channel information and/or the at least one alert.

As explained above for claim elements [1.1] and [1.12] the WebSphere+Austin-Lane combination teaches this claim at least because only "those users who have subscribed to that information" (EX1009, 2) and only those users that are "in an Intelligent Notification Services user group" (EX1009, 15) receive the first channel information (stock price information) and/or the alert (the stock price alert). *Supra* Sections VII.C.1.a, VII.C.1.l. Moreover, as explained above for claim element [1.1], the user must log in to their account to receive at least some of the first channel information. *Supra* Section VII.C.1.a. And, as explained above for claim element [1.6] (*supra* Section VII.C.1.f), the apparatus authenticates (e.g., enrolls) the at least one user platform during device enrollment (*e.g.*, EX1004, 27-28; EX1006, 354; EX1007, 8), as was well known in the art (*supra* Section IV.B.2). *See also supra* Section VII.C.1.h (describing tickets/tokens/certificates (e.g., LTPA tokens, X.509 certificates) that are used as part of authenticating users and/or user devices); EX1004, 630, 639-640, 899-900; EX1005, 270, 365-401. EX1003, ¶154.

14. Claim 29

> [29.1] The apparatus of claim 1, wherein in A), the at least one processer implements a channel server that defines one or more visual characterizations, one or more functions or features, and/or one or more information types provided by respective channels of the plurality of channels through which the user receives and/or interacts with the respective portions of the secure user-centric information, wherein the channel server implements at least the first channel, and wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by: I) controlling the at least one communication interface to transmit at least some of the first channel information to the at least one user platform.

The WebSphere+Austin-Lane combination teaches this claim at least because the at least one processor implements a channel server (e.g., web application server (WAS), portlet container & services, and page aggregation) that implements at least the first channel (stock portlet and/or message center portlet) and that defines one or more visual characterizations (e.g., themes and/or skins), one or more functions or features, and/or one or more information types provided by respective channels of the plurality of channels through which the user receives and/or interacts with the respective portions of the secure user-centric information. EX1004, 6, 8, 18-19, 28-29, 30, 34, 48-49, 60, 116, 152-153, 241, 630, 946-947, 956, 989, 1000; EX1005, 4-6, 13-17, 141, 241-247, 277, 493-494; EX1006, 6, 10, 30, 34, 42, 390; EX1007, 290-293, 308-311, 319-321; EX1008, 66-67, 182; EX1009, 1-50. EX1003, ¶155.

For example, each channel (portlet) is "executed inside a Web container [(referred to as "the Portlet container")] managed by the application server"

(EX1004, 116), which uses JavaServer Pages (JSPs) to implement the themes and skins of the portlets (*e.g.*, EX1004, 354). *E.g.*, EX1005, 4-6, 15-17, 242-244.

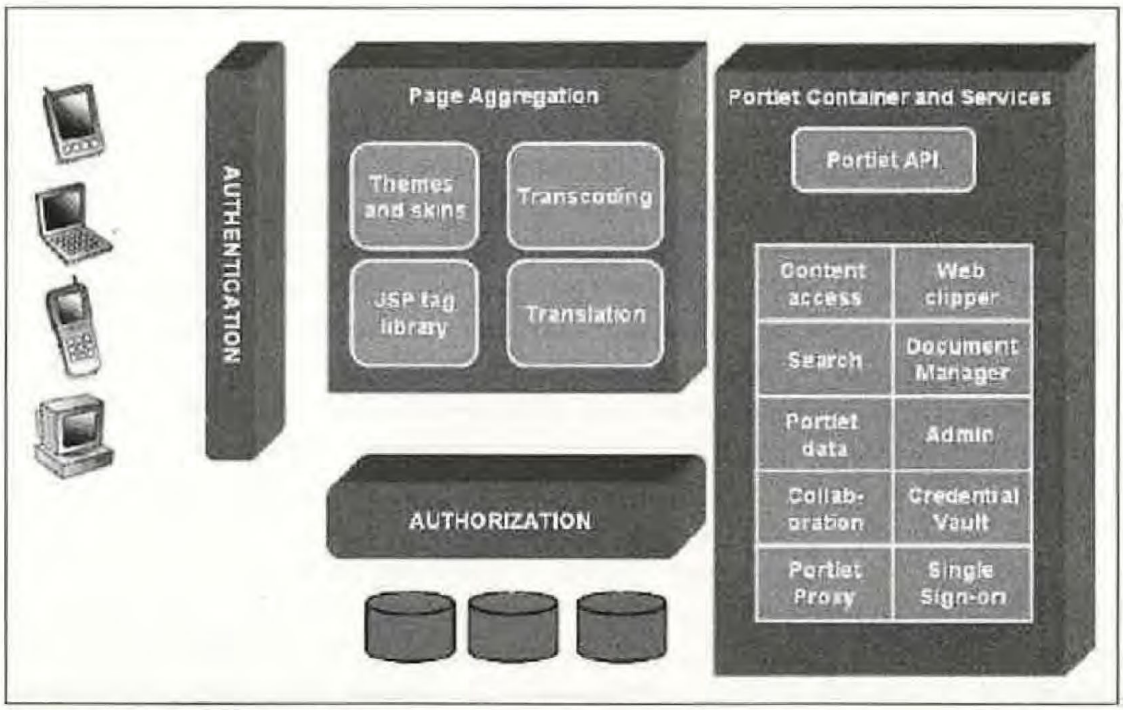

Figure 13-1 Portal architecture.

EX1005, 242.

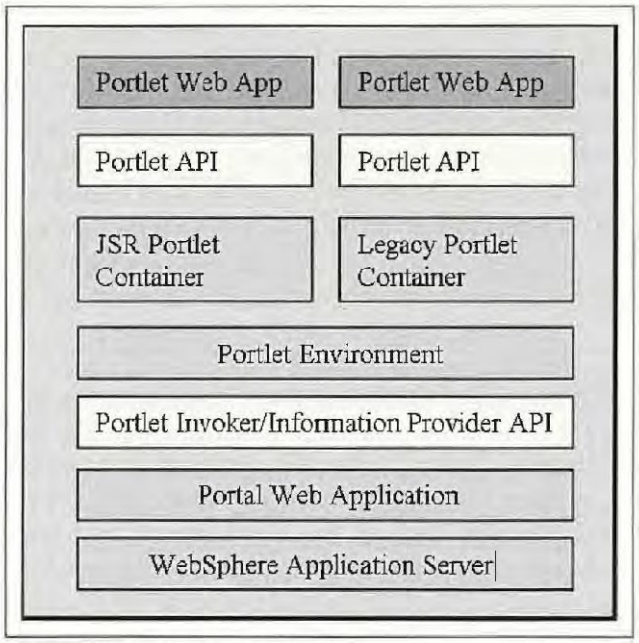

Figure 13-2 Portlet container.

EX1005, 244.

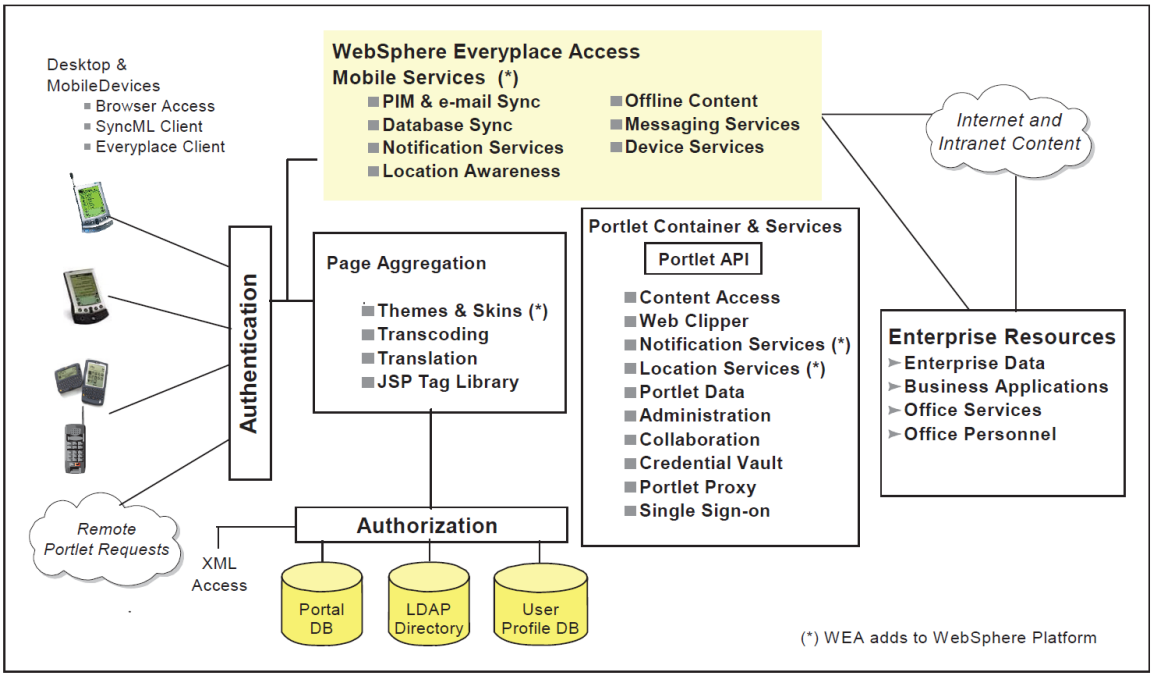

Figure 1-2 WebSphere Everyplace Access server

EX1006, 5.

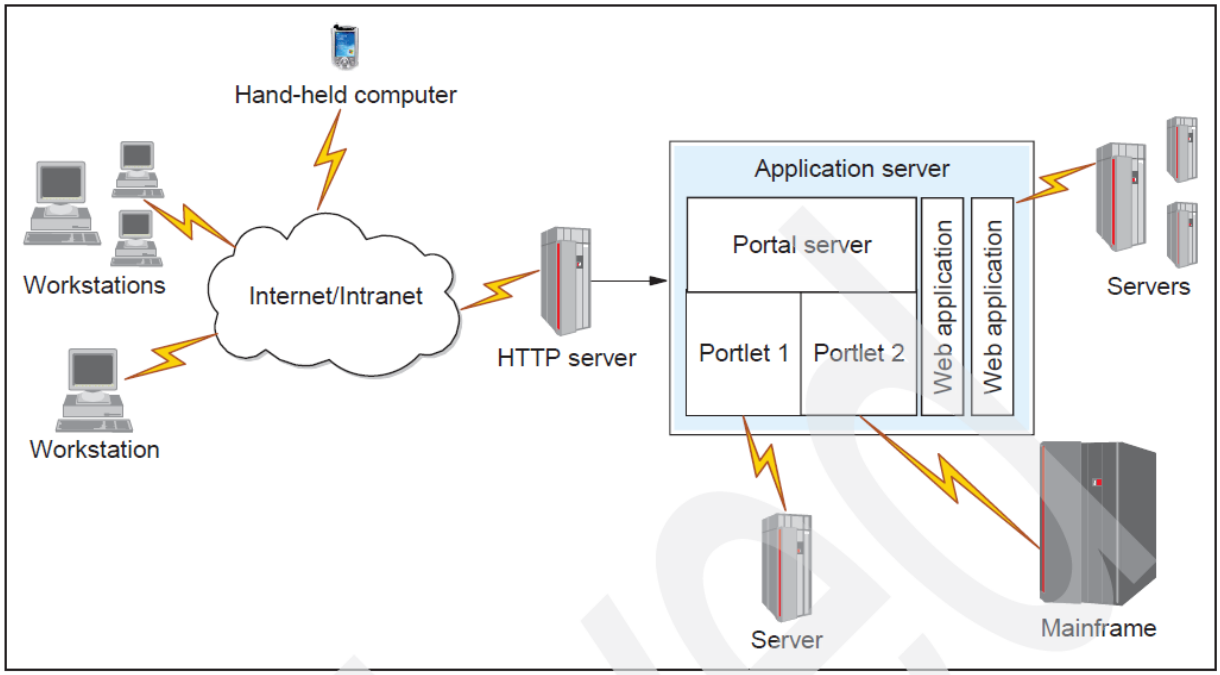

Figure 1-13 Portal Solutions - portlet to remote application

EX1004, 43. EX1003, ¶156.

As explained above for claim elements [1.1], [1.5], and [1.9-1.12], the WebSphere references disclose or suggest that the processor controls the at least one communication interface to transmit at least some of the first channel information (stock price information) to the at least one user platform. *Supra* Sections VII.C.1.a, VII.C.1.e, VII.C.1.i-l. EX1003, ¶157.

15. <u>Claims 35-36</u>

Claims 35 and 36 are substantively identical to claim 1 except they do not require a communication interface or processor. Thus, these claims are obvious for the same reasons claim 1 is obvious. *Supra* Section VII.C.1. EX1003, ¶158.

VIII. NO OBJECTIVE INDICIA OF NON-OBVIOUSNESS

Petitioner does not expect Patent Owner to argue for any objective indicia of non-obviousness that have a nexus to the difference between the claimed invention and the disclosure in the prior art cited herein (e.g., the IBM references and Austin-Lane). *Novartis AG v. Torrent Pharms. Ltd.*, 853 F.3d 1316, 1331 (Fed. Cir. 2017) (affirming PTAB obviousness decision).

IX. CONCLUSION

Petitioner requests institution and cancellation of the challenged claims.

Respectfully submitted,

Dated: September 20, 2024

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CERTIFICATE OF COMPLIANCE WITH
TYPE-VOLUME LIMITATION PURSUANT TO 37 C.F.R. § 42.24

This brief complies with the type-volume limitation of 37 C.F.R. § 42.24(a)(1)(i).

The brief contains 13,990 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

The brief has been prepared in a proportionally spaced typeface using Microsoft Word for O365 in a 14-point Times New Roman font.

Dated: September 20, 2024

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CERTIFICATE OF SERVICE
IN COMPLIANCE WITH 37 C.F.R. § 42.6(E)(4)

The undersigned certifies that the **Petition for *Inter Partes* Review of U.S. Patent No. 8,751,948 and Exhibits 1001-1010, 1015, 1017-1023, 1025, and 1028-1042** were served on September 20, 2024, via **Express Mail** on the Patent Owner at the following address of record as listed on the USPTO Patent Center:

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