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Wang et al.

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(54) **METHOD AND APPARATUS FOR MULTIMEDIA COMMUNICATIONS WITH DIFFERENT USER TERMINALS**

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This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

(63) Continuation of application No. 11/802,418, filed on May 22, 2007, now Pat. No. 7,957,733, which is a continuation-in-part of application No. 11/501,747, filed on Aug. 10, 2006, now Pat. No. 7,603,131, and a continuation-in-part of application No. 11/165,341, filed on Jun. 24, 2005, now Pat. No. 7,899,492, said application No. 11/802,418 is a continuation-in-part of application No. 11/540,637, filed on Oct. 2, 2006, now Pat. No. 7,647,024.

(60) Provisional application No. 60/787,510, filed on Mar. 31, 2006, provisional application No. 60/707,561, filed on Aug. 12, 2005, provisional application No. 60/588,358, filed on Jul. 16, 2004, provisional application No. 60/722,444, filed on Oct. 3, 2005, provisional application No. 60/787,510, filed on Mar. 31, 2006, provisional application No. 60/832,962, filed on Jul. 25, 2006, provisional application No. 60/899,037, filed on Feb. 2, 2007.

(51) **Int. Cl.**
H04W 4/00 (2009.01)

(52) **U.S. Cl.** **455/426.2**; 455/414.1; 455/426.1; 455/416; 725/62; 709/250; 709/249; 709/228

(58) **Field of Classification Search** 455/414.1, 455/426.1, 416; 709/250, 249, 228; 725/62
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,760,797	B1 *	7/2004	Kim	....	710/107
7,957,733	B2 *	6/2011	Wang et al.	....	455/426.2
2002/0075382	A1 *	6/2002	Cohen	....	348/14.01
2002/0141403	A1 *	10/2002	Akahane et al.	....	370/389
2002/0144121	A1 *	10/2002	Ellison et al.	....	713/176
2002/0147978	A1 *	10/2002	Dolgonos et al.	....	725/62
2003/0153280	A1 *	8/2003	Kopp et al.	....	455/90
2003/0226143	A1 *	12/2003	Michael et al.	....	725/32
2004/0158873	A1 *	8/2004	Pasqualino	....	725/131
2005/0114891	A1 *	5/2005	Wasenius	....	725/62

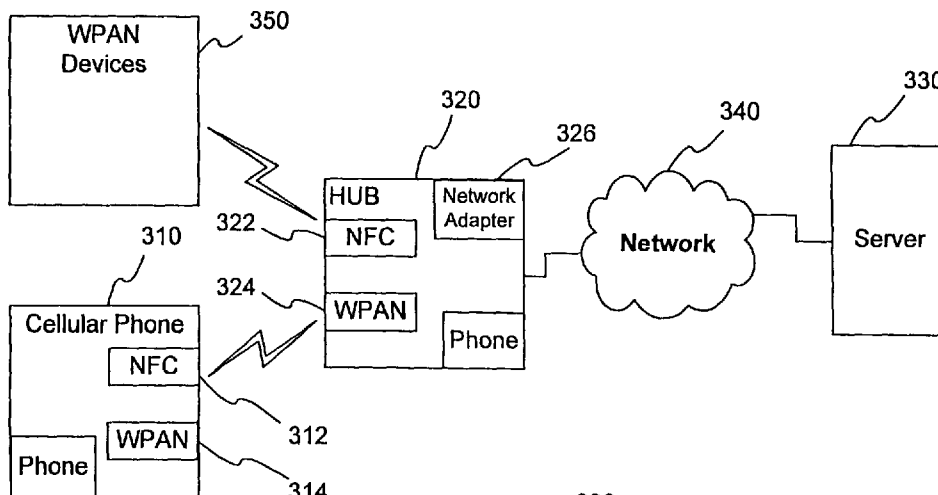* cited by examiner

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(57) **ABSTRACT**

Multimedia communications with cross-layer optimization in multimedia communications with different user terminals. Various optimization for the delivery of multimedia content across different channels are provided concurrently to a plurality of user terminals.
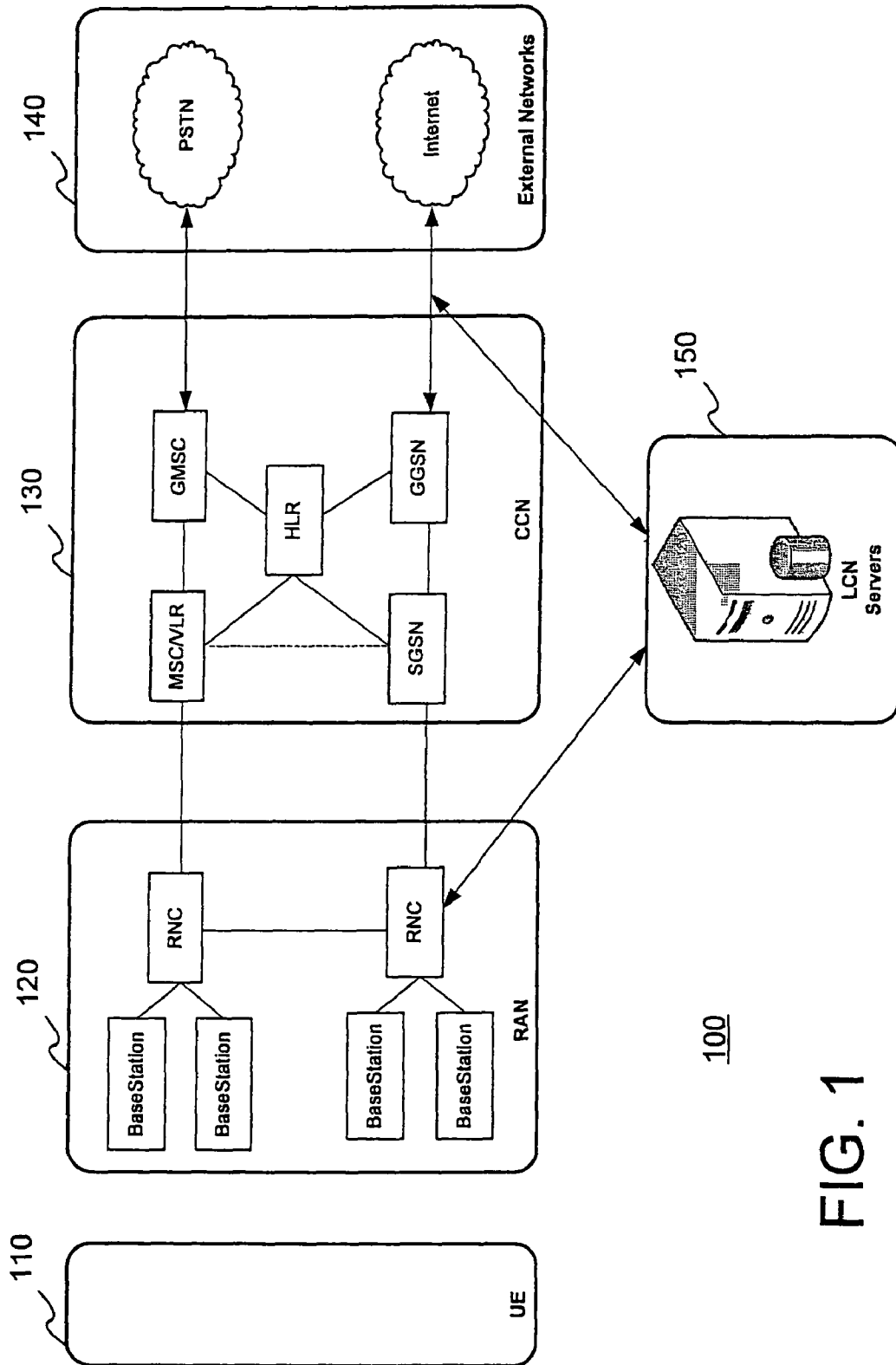
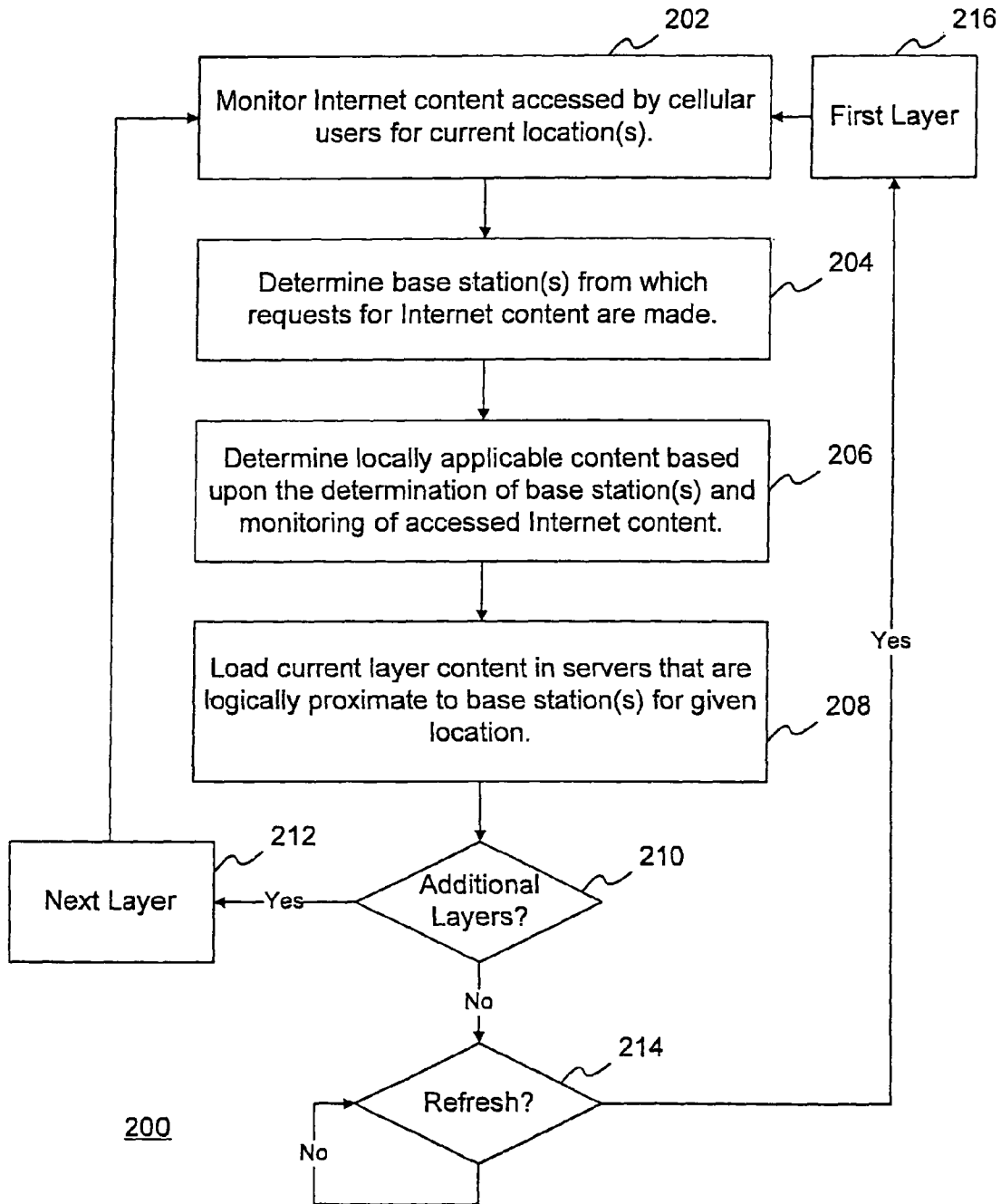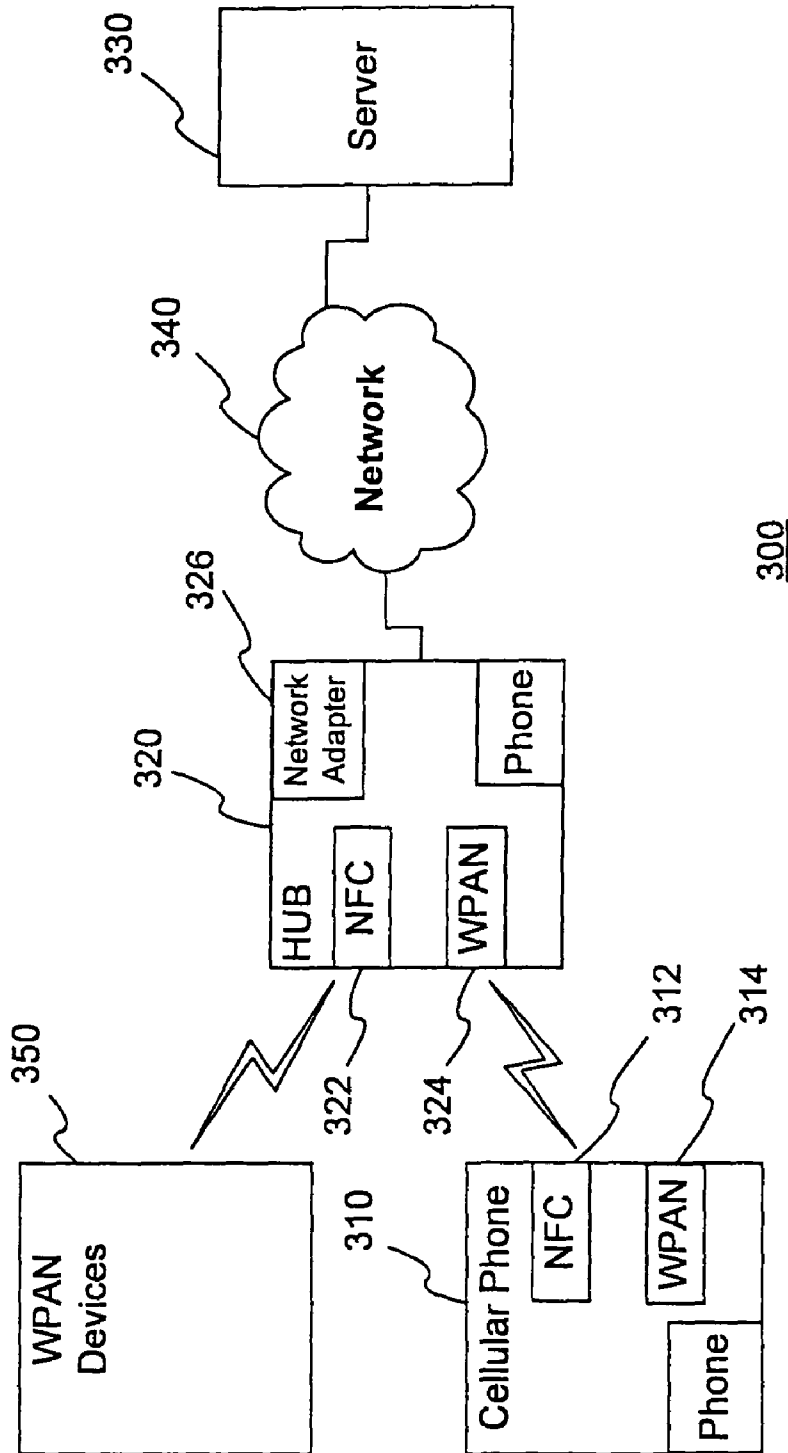**93 Claims, 20 Drawing Sheets**

FIG. 1

202

216

Monitor Internet content accessed by cellular users for current location(s). | First Layer

Determine base station(s) from which requests for Internet content are made.

204

Determine locally applicable content based upon the determination of base station(s) and monitoring of accessed Internet content.

206

Load current layer content in servers that are logically proximate to base station(s) for given location.

208

Yes

212

Next Layer ← Yes — Additional Layers?

210

No

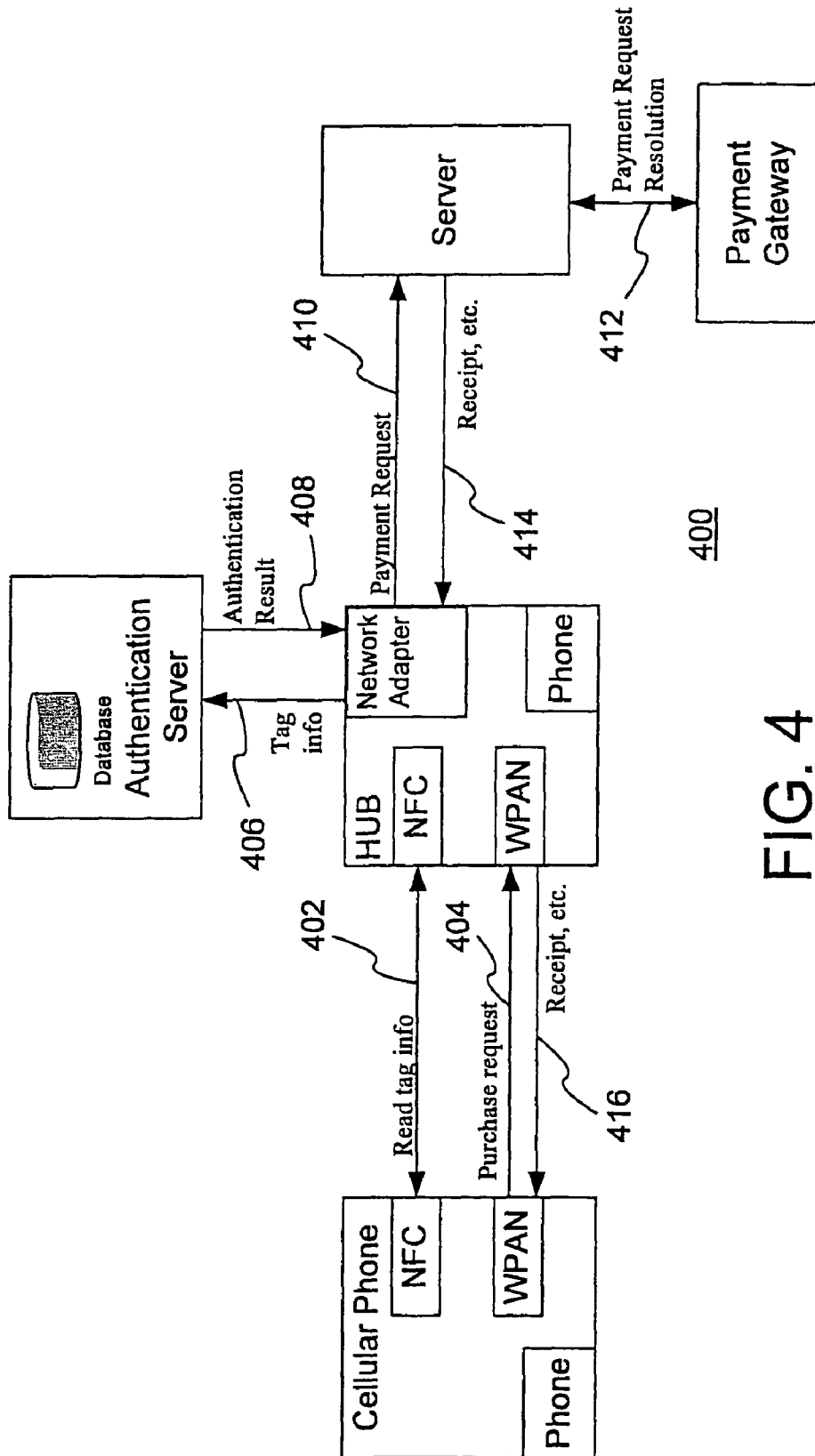No

Refresh?

214

200

FIG. 2

FIG. 3

FIG. 4

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