

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 November 2007 (22.11.2007)

(10) International Publication Number
WO 2007/134338 A3

- (51) **International Patent Classification:**
G06F 9/445 (2006.01)
- (21) **International Application Number:**
PCT/US2007/069021
- (22) **International Filing Date:** 16 May 2007 (16.05.2007)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**

60/801,083	16 May 2006 (16.05.2006)	US
60/800,943	16 May 2006 (16.05.2006)	US
60/801,091	16 May 2006 (16.05.2006)	US
11/748,767	15 May 2007 (15.05.2007)	US
11/748,791	15 May 2007 (15.05.2007)	US
- (71) **Applicant (for all designated States except US):** **BEA SYSTEMS, INC.** [US/US]; 2315 North First Street, San Jose, California 95131 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **LANGEN, Anno**

R. [DE/US]; 973 Indian Rock Avenue, Berkeley, California 94707 (US). **KHAN, Rao Nasir** [IN/US]; 2000 Walnut Avenue, #E206, Fremont, California 94358 (US). **WILKIEWICZ, Jaroslaw** [US/US]; 3650 Broderick Street, #103, San Francisco, California 94123 (US).

- (74) **Agents:** **MEYER, Sheldon, R.** et al; Fliesler Meyer LLP, 650 California Street, Fourteenth Floor, San Francisco, California 94108 (US).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH,

[Continued on next page]

(54) **Title:** HITLESS APPLICATION UPGRADE FOR SIP SERVER ARCHITECTURE

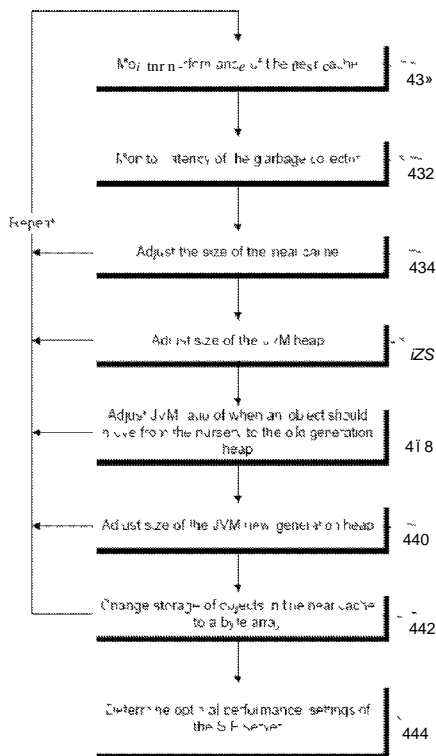


Fig V RE 4C

(57) **Abstract:** The SIP server can be comprised of an engine tier, and a state tier distributed on a cluster network environment. The engine tier can send, receive and process various messages. The state tier can maintain in-memory state data associated with various SIP sessions. Various applications can be running on the engine tier. A new version of an application can be deployed along side the old versions, simultaneously tutoring on the SIP server (Fig 4C, #440). Incoming messages for new calls can be directed by the SIP server to the new version of the application. Incoming messages for previously established calls can be directed to the old version of the application (Fig 4C, #440). Once the old version is finished processing calls, it can be undeployed (Fig 4C, #448).

WO 2007/134338 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- *the filing date of the international application is within two months from the date of expiration of the priority period*
- *with information concerning one or more priority claims considered void*

Published:

- *with international search report*

(88) Date of publication of the international search report:
9 October 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/6902 1

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: G06F 9/445(2006.01)

USPC: 717/171

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 717/171

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 WEST


C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US (5,747,970 B1 (Lamb et al) 08 June 2004 (08.06.2004) Abstract Col Lines 42 57-67 1 53-64 24 27-39 22 26-39 14 47-61 15 1-26	1-19

Further documents are listed in the continuation of Box C. See patent family annex.

Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search 08 June 2008 (08.06.2008)	Date of mailing of the international search report 25 JUL 2008
--	--

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Todd Ingberg Telephone No. (571) 272-2 100 
---	--

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/69021

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 6,704,933 B1 (Tanaka et al) 09 March 2004 (09.05 2004) Abstract, Figures 2B, 4, 32 Col Lines 1 46-60 2 56 - 68	1-19