

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
20 March 2008 (20.03.2008)

PCT

(10) International Publication Number  
**WO 2008/033391 A3**

(51) International Patent Classification:  
G06F 9/44 (2006.01)

(21) International Application Number:  
PCT/US2007/019803

(22) International Filing Date:  
11 September 2007 (11.09.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
11/519,255 11 September 2006 (11.09.2006) US

(71) Applicant (for all designated States except US): **THE MATHWORKS, INC.** [US/US]; 3 Apple Hill Drive, Natick, MA 01760 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LONGFRITZ, Michael, James** [US/US]; 110 Prentice Street, Waltham, MA 02451 (US). **OROFINO, Donald, Paul** [US/US]; 32 Bent Road, Sudbury, MA 01776 (US).

(74) Agents: **CANNING, Kevin, J.** et al.; Lahive & Cockfield, LLP, One Post Office Square, Boston, MA 02109-2127 (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, DO, 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.

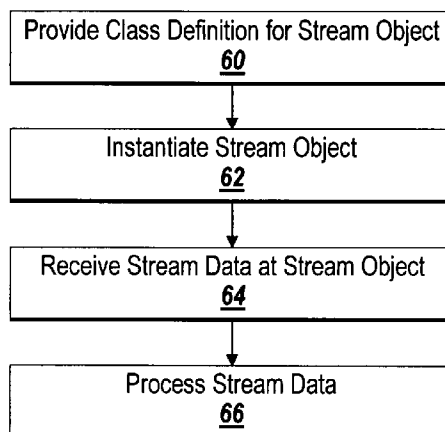
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, 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).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
15 May 2008

(54) Title: SYSTEM AND METHOD FOR USING STREAM OBJECTS TO PERFORM STREAM PROCESSING IN A TEXT-BASED COMPUTING ENVIRONMENT



(57) Abstract: A mechanism for using stream objects in stream processing operations is provided. A definition of a class of stream objects used in stream processing algorithms can define output and update operations included in instances of the stream objects and the API (application programming interface) through which they may be called. The class definition may further include the type of state information to be held by the instantiated stream objects. An instance of the stream object may be instantiated in a text-based computing environment and the operations may be used to process streams of data.



WO 2008/033391 A3

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/019803

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. G06F9/44

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)  
G06F

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 practical, search terms used)  
EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/055398 A1 (OLSON LANCE E [US] ET AL) 10 March 2005 (2005-03-10) abstract paragraph [0001] paragraphs [0009] - [0011] paragraphs [0029] - [0032] paragraphs [0035] - [0040] paragraphs [0048] - [0049] paragraphs [0054] - [0056] paragraphs [0058] - [0060] claims 17,19-21  <div style="text-align: center;">----- -/--</div>	1-69

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

\* Special categories of cited documents :

<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p>	<p>*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</p> <p>*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</p> <p>*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.</p> <p>*Z* document member of the same patent family</p>
--	--

Date of the actual completion of the international search  <b>10 March 2008</b>	Date of mailing of the international search report  <b>27/03/2008</b>
---	---

Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <b>Tomàs Blanch, F</b>
---	--

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/019803

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 2003/005169 A1 (PERKS MICHAEL ALBERT [US] ET AL) 2 January 2003 (2003-01-02)  abstract  paragraph [0002]  paragraphs [0005], [0006]  paragraph [0013]  paragraph [0035]  paragraphs [0039], [0040]  paragraphs [0060], [0061]  claims 1,3,5-8</p>	1-69
A	<p>WO 03/052597 A (KONINKL PHILIPS ELECTRONICS NV [NL]; RUTTEN MARTIJN J [NL]; VAN EIJDH)  26 June 2003 (2003-06-26)  abstract  page 1, lines 20,21  page 1, line 27 - page 2, line 8  page 2, line 33 - page 3, line 10  page 5, lines 23,24  page 6, lines 9-16  claims 1,3,6-8</p>	1-69
A	<p>US 6 260 187 B1 (CIRNE LEWIS K [US])  10 July 2001 (2001-07-10)  the whole document</p>	1-69
A	<p>US 6 163 776 A (PERIWAL DAMODAR D [US])  19 December 2000 (2000-12-19)  the whole document</p>	1-69

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/019803

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005055398 A1	10-03-2005	US 6996833 B1	07-02-2006
US 2003005169 A1	02-01-2003	NONE	
WO 03052597 A	26-06-2003	AU 2002353280 A1 CN 1602467 A JP 2006515690 T US 2005081200 A1	30-06-2003 30-03-2005 01-06-2006 14-04-2005
US 6260187 B1	10-07-2001	US 2002007482 A1	17-01-2002
US 6163776 A	19-12-2000	NONE	