



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18330

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 15/173

US CL :709/223, 224

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. : 709/223, 224

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)

EAST, INTERNET

search terms: packet, examine, analysis, analyze, monitor, cam, comparator, parser, table, lookup, flow, database

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,917,821 A (GOBUYAN et al), ABSTRACT, FIGURES 1, 3, COL. 1, LINES 45-67, COL. 4, LINES 20-67, COL. 7, LINES 34-67, COL. 22, LINES 15-17	1-3, 6-40, 45-59, 94-100, 119-124
Y	US 5,414,704 A (SPINNEY) 09 MAY 1995, ABSTRACT, COL. 1, LINES 38-68, COL. 2, LINES 1-68, COL. 3, LINES 1-53, COL. 5, LINES 30-59, COL. 7, LINES 5-57, COL. 8, LINES 51-68, COL. 9, LINES 1-65, COL. 11, LINES 38-68, COL. 12, LINES 1-22, COL. 13, LINES 31-68, COL. 14, LINES 1-68, COL. 15, LINES 1-68, COL. 16, LINES 1-68.	1-59, 94-104, 119-124
A, P	US 6,014,380 A (HENDEL et al) 11 JANUARY 2000, COL. 3, LINES 65-67, COL. 4, LINES 1-50, COL. 5, LINES 1-25	1

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

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier document published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search

21 FEBRUARY 2001

Date of mailing of the international search report

28 MAR 2001

Name and mailing address of the ISA/US
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,511,215 A (TERASAKA et al) 23 APRIL 1996, ABSTRACT, COL. 4, LINES 15-60, COL. 6, LINES 3-20	1
Y	US 5,351,243 A (KALKUNTE et al) 27 SEPTEMBER 1994, ABSTRACT, FIGURES 3, 4, COL. 1, LINES 36-65, COL. 2, LINES 14-23, COL. 3, LINES 1-68, COL. 4, LINES 1-68, COL. 5, LINES 20-68, COL. 6, LINES 1-68, COL. 7, LINES 3-19, COL. 8, LINES 48-68, COL. 9, LINES 1-68, COL. 25, LINES 15-68, COL. 26, LINES 1-65	1-22, 24-59, 94- 104, 119-124
Y	US 5,787,253 A (MCCREERY et al) 28 JULY 1998, ABSTRACT, FIGURES 2, 4A-4D, 8-11, COL. 2, LINES 8-67, COL. 4, LINES 3-67	1-5, 9-34, 36-42, 46-59, 94-98, 119-123
A	US 5,247,517 A (ROSS et al) 21 SEPTEMBER 1993, ABSTRACT,	1
Y	US 5,315,580 A (PHAAL) 24 MAY 1994, ABSTRACT, COL. 1, LINES 60-68, COL. 2, LINES 1-68, COL. 3, LINES 33-68, COL. 4, LINES 1-65, COL. 6, LINES 28-61	1

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-59, 94-104 and 119-124

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-59, 94-104, AND 119-124, drawn to signatures, packet monitoring and parsing.

Group II, claim(s) 60-77, drawn to performing protocol specific operations and compression.

Group III, claim(s) 78-93, drawn to analyzing packets and quality of service.

Group IV, claim(s) 105-118, drawn to a cache system.

Group V, claim(s) 125-128, drawn to a processor.

Group VI, claim(s) 129-144, drawn to searching and a comparator.

The inventions listed as Groups I, II, III, IV, V, and VI do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The inventive groups are drawn towards divergent, distinctly different inventions. Technical features for Group I, are for signatures, packet monitoring and parsing. While the technical features of Group II, are for performing protocol specific operations and compression. While the technical features for Group III, are for to analyzing packets and quality of service. While the technical features for Group IV, are for a cache system. While the technical features for V, are for to a processor. While the technical features for Group VI, are for. searching and a comparator.