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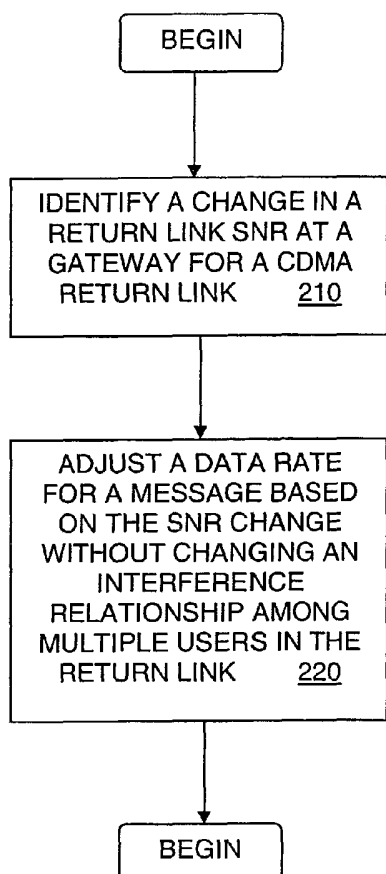
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SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: NOISE COMPENSATION IN SATELLITE COMMUNICATIONS



(57) Abstract: A quality measure, such as a signal-to-noise ratio, of a signal arriving at a gateway for a return link is used to adjust a data rate for the link. The return link is transferred from a terminal to the gateway through a satellite, and shared by a number of user terminals at any given time, including the terminal for which the data rate is adjusted. The terminals sharing the link have a certain interference relationship. Adjusting a data rate for a message sent from one or more terminals through the return link in the presence of signal degradation or power loss does not appreciably change the interference relationship among the plurality of terminals.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04B7/185

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04B B04B H04L H04Q

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, INSPEC, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 17311 A (TACHYON INC) 8 March 2001 (2001-03-08) page 1, line 23 - line 27 page 3, line 16 - line 28 page 4, line 17 - line 23 page 5, line 3 - line 29 page 6, line 31 - line 33 figures 1-3	1-4, 7-10, 21, 22, 25, 26, 30, 31, 38, 39, 42, 43, 49, 50, 53-56
Y	-/--	5, 6, 11-14, 23, 24, 27-29, 40, 41,

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "&" document member of the same patent family

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International Application No

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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.
Y	<p style="text-align: center;">---</p> US 5 903 554 A (SAINTS KEITH W) 11 May 1999 (1999-05-11) column 6, line 14 -column 7, line 6 column 7, line 54 - line 64 claims 1,4,5; figures 1-3	44,51,52 5,6,14, 23,24, 40,41, 51,52
Y	<p style="text-align: center;">---</p> WO 02 43341 A (INNOVATIVE TECHNOLOGY LICENSIN) 30 May 2002 (2002-05-30) abstract page 2, line 22 -page 3, line 17 page 6, line 29 -page 7, line 23 page 8, line 26 - line 31 table 1	11-13, 27-29,44
A	<p style="text-align: center;">---</p> EP 0 651 531 A (AT & T CORP) 3 May 1995 (1995-05-03) abstract; figure 1	1,21,38, 49
A	<p style="text-align: center;">---</p> WO 02 39650 A (ERICSSON TELEFON AB L M) 16 May 2002 (2002-05-16) page 6, line 29 -page 7, line 4 page 7, line 27 - line 30	1,21,38, 49
A	<p style="text-align: center;">---</p> US 6 377 561 B1 (BLACK COLIN J ET AL) 23 April 2002 (2002-04-23) abstract column 32, line 64 -column 34, line 14	1,21,38, 49
A	<p style="text-align: center;">---</p> WO 99 60810 A (FEBVRE PAUL ROGER ;PHILLIPS KEVIN PAUL (GB); INMARSAT LTD (GB)) 25 November 1999 (1999-11-25) abstract page 10, line 19 - line 21 page 11, line 11 - line 21	15-20, 32-37, 45-48, 57-59
A	<p style="text-align: center;">---</p> WO 98 37713 A (ERICSSON TELEFON AB L M) 27 August 1998 (1998-08-27) page 1, line 11 - line 16 page 9, line 27 - line 35 page 10, line 24 - line 30 page 11, line 22 - line 34 figures 3,4	15-20, 32-37, 45-48, 57-59
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/23066

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

This International Search 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:

see additional 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.:

Remark on Protest

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

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14,21-31,38-44,49-56

Measuring quality and changing the data rate in reponse.

2. Claims: 1,15-20,21,32-37,38,45-48,49,57-59

Formatting messages on time slots.

INTERNATIONAL SEARCH REPORT

International Application No

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International Application No

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