



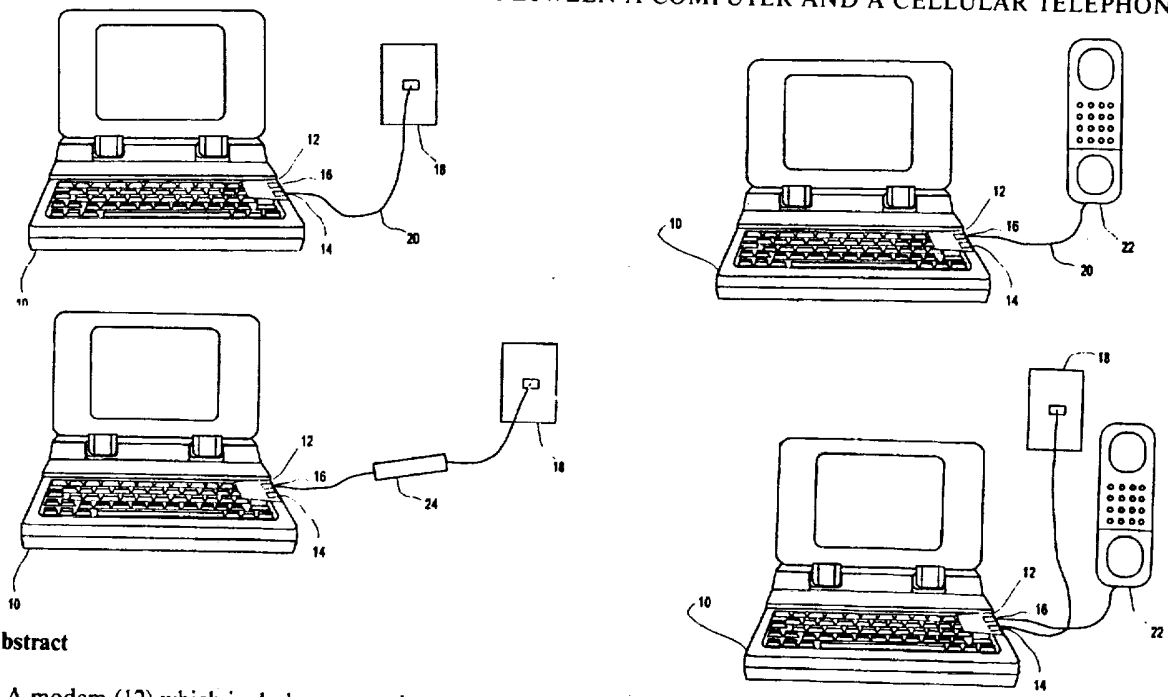
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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 (71) Applicant: COMPAQ COMPUTER CORPORATION [US/US]; 20555 State Highway 249, Houston, TX 77070 (US).  
 (72) Inventors: DYKES, Don, A. ; 15202 Jones Road, Houston, TX 77070 (US). CASTELL, Robin, T. ; 6703 River Mill Drive, Spring, TX 77379 (US). CLARK, Andrew, C. ; 4030 University Boulevard, Houston, TX 77005 (US). NAGEL, Paul, E. ; 103 Cochrans Green, The Woodlands, TX 77381 (US). TRAN, Huyen, B. ; 9717 Cypresswood Drive, Houston, TX 77070 (US). JONES, Randall, L. ; 4000 Palo Duro, Plano, TX 75074 (US). BALDRIDGE, Ronald, L. ; 1626 Kingspoint Drive, Carrollton, TX 77007 (US).

(74) Agent: BURDETT, James, R.; Compaq Computer Corporation, Mail Stop 060803, 20555 State Highway 249, Houston, TX 77070 (US).  
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(54) Title: MODEM FOR A TIGHT COUPLING BETWEEN A COMPUTER AND A CELLULAR TELEPHONE



(57) Abstract  
 A modem (12) which includes connections (14, 16) for both land lines (18) and a cellular phone (22). The modem contains high and low level routines that allow it to perform standard AT commands rationally when connected to a cellular phone, and further perform additional AT commands that access cellular specific features. An applications software program in a computer both are connected. First, it can default to the land line and only use the cellular phone if the land line or the cellular phone when both are connected. First, it can default to the land line and only use the cellular phone if the land line is not available. Alternatively, it can first use the cellular phone and only use the land line if the cellular phone signal strength is not sufficient. Further, cellular file transfer operations can be aborted if the remaining battery life in the cellular phone is insufficient to reliably complete the transfer.

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## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 93/10984

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 5 H04Q7/04 H04M11/06

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)  
 IPC 5 H04Q H04M G06F H04L

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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO,A,91 07044 (INTELLIGENCE TECHNOLOGY CORPORATION) 16 May 1991 see abstract see page 7, line 13 - line 19 see page 10, line 9 - page 11, line 11 see page 12, line 4 - line 30 see page 15, line 10 - line 14	1, 18
A	---	2-17, 19-23, 25
A	WO,A,92 10047 (NOKIA) 11 June 1992 see abstract see page 2, line 14 - line 30 see page 3, line 6 - page 4, line 7	1-23
A	US,A,5 127 041 (O'SULLIVAN) 30 June 1992 see abstract see column 6, line 4 - column 8, line 29 ---	1-23
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

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- "P" document published prior to the international filing date but later than the priority date claimed

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- "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
- "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.
- "&" document member of the same patent family

Date of the actual completion of the international search

19 August 1994

Date of mailing of the international search report

09.09.94

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

Mikkelsen, C

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 93/10984

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO,A,89 05553 (BT TELECOM INC.) 15 June 1989 see page 20, line 16 - page 22, line 30; figures 11,12	24
A	---	26
A	EP,A,0 504 007 (FUJITSU) 16 September 1992 see abstract -----	14,25

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 93/ 10984

**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:

1. Claims 1-23: Conversion of land line AT commands to appropriate cellular phone commands
2. Claim 24 : Default connection to a land line
3. Claim 25 : Cellular file transfer
4. Claim 26 : Connection over a land line if the cellular phone signal strength is below a predetermined threshold

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.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 93/10984

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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