

EXHIBIT 17

340-825
 08/ 295173
 825.340
 Subclass
 ISSUE CLASSIFICATION

5572193

UTILITY SERIAL NUMBER 08/ 295173	PATENT DATE NOV 05 1996	PATENT NUMBER
SERIAL NUMBER 08/295173	FILING DATE 08/22/94	CLASS 370
SUBCLASS 825.340	GROUP ART UNIT	EXAMINER Zimmerman

APPLICANTS MARY B. FLANDERS, LOUISVILLE, CO; LARRY C. FARRINGTON, WHEELING, IL; LARRY C. FARRINGTON, WHEELOCK, IL.

CONTINUING DATA***
 WITHDRAWN 10/17/95 AS A CONTINUED APPLICATION
 WHICH IS A CONTINUED APPLICATION OF 07/625,227 12/10/90 PAT 5,239,794

FOREIGN/PCT APPLICATIONS***
 VERIFIED
 Bd none

NOTE-DISCLAIMER
 The term of this patent shall not extend beyond the expiration date of Pat. No. 5,239,794.

FOREIGN FILING LICENSE GRANTED 10/09/94

Foreign priority claimed 35 USC 119 conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	AS FILED	STATE OR COUNTRY	SHEETS DRWGS.	TOTAL CLAIMS	INDEP. CLAIMS	FILING FEE RECEIVED	ATTORNEY'S DOCKET NO.
Verified and Acknowledged	Examiner's Initials	→	US	3	14	12	\$1,704.00	08121024NP04

ADDRESS MOTOROLA INC
 INTELLECTUAL PROPERTY DEPT
 CORPORATE OFFICES
 1300 E. BROADWAY ROAD
 SCHLAUBURG IL 60196

TITLE METHOD FOR AUTHENTICATION AND PROTECTION OF SUBSCRIBERS IN TELECOMMUNICATIONS SYSTEMS

U.S. DEPT. OF COMM./ PAT. & TM—PTO-436L (Rev.12-94)

CERTIFICATE		
PARTS OF APPLICATION FILED SEPARATELY		APR 22 1997
NOTICE OF ALLOWANCE MAILED 10.17.95	OF CORRECTION Assistant Examiner Brian Zimmerman	CLAIMS ALLOWED
ISSUE FEE		Total Claims: 44 Print Claims: 1
Amount Due: 1250. ⁰⁰ Date Paid: 11-16-95	Primary Examiner [Signature]	DRAWING
DISCLAIMER LABEL		Sheets Drwg: 3 Figs. Drwg: 3 Print Fig: 1
Application No: 08/295173	PREPARED FOR ISSUE	
ISSUE BATCH NUMBER: [Signature]		

FORM PTO-1267 U.S. Department of Commerce Patent and Trademark Office (Rev. 11-92)
DISCLAIMER LABEL
 Application No. 08/295173
 A terminal disclaimer has been entered and recorded under 35 U.S.C. 253 in this file.
DO NOT DESTROY

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Form PTO-436A (Rev. 8/92)

(FACE)



NEGATIVE PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : FLANDERS ET AL. EXAMINER: 220 Brian Zimmerman

SERIAL NO. : 08/295,173 GROUP : 2604

FILED : 8/22/94 CASE NO. : CE02132RP04

ENTITLED : METHOD AND APPARATUS FOR AUTHENTICATION IN A COMMUNICATION SYSTEM

RECEIVED
APR 27 1995
GROUP 2200

31
4-28-95

P
Motorola, Inc.
Corporate Offices
1303 E. Algonquin Road
Schaumburg, IL 60196
April 10, 1995

AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

In response to the Official Action dated December 14, 1994 (Paper No. 15) please amend the above-identified patent application as follows. A petition for extension of time for one month is also enclosed.

In the Claims

Please amend the claims as follows:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on 4/12/95
(Date of Deposit)

Brian Zimmerman
Name of applicant, assignee, or Registered Rep
Brian Zimmerman 4/12/95
Signature Date

16. (Twice Amended) A method of authentication between a subscriber unit and a communication unit of a communication system, comprising:
- (a) maintaining a non-arbitrary value [corresponding to] which is a count of occurrences of a communication event in the subscriber unit;
 - (b) generating an authentication message in the subscriber unit as a function of [the] at least part of the non-arbitrary value; and
 - (c) transmitting the authentication message to the communication unit.

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18. (Twice Amended) A method of authentication between a subscriber unit and a communication unit of a communication system, comprising:
- (a) receiving an authentication message at the communication unit;
 - (b) maintaining a non-arbitrary value [corresponding to] which is a count of occurrences of a communication event in the communication unit; and
 - (c) determining in the communication unit, through the use of the received authentication message and the maintained non-arbitrary value, whether a received service request is authentic.

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38. (Twice Amended) A subscriber unit which authenticates communications with a communication unit of a communication system, comprising:
- (a) memory means for maintaining a non-arbitrary value [corresponding to] which is a count of occurrences of a communication event;
 - (b) processor means for generating an authentication message as a function of [the] at least part of the non-arbitrary value; and
 - (c) transmitter means for transmitting the authentication message to the communication unit.

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40. (Twice Amended) A communication unit which authenticates communications with a subscriber unit of a communication system, comprising:
- (a) receiver means for receiving an authentication message;
 - (b) memory means for maintaining a non-arbitrary value [corresponding to] which is a count of occurrences of a communication event; and
 - (c) processor means for determining, through the use of the received authentication message and the maintained non-arbitrary value, whether a received service request is authentic.

Remarks

Upon entry of this Amendment claims 16-59 are pending in the application, with claims 16, 18, 38 and 40 being amended.

All claims 16 -59 were rejected as being obvious over Bongard in view of either Howard or Noble. As the examiner has previously noted, Howard discloses use of a value corresponding to the elapsed time since a clock was last reset for modifying an ID. Noble discloses a pseudo-random coupling code generated at the end of each

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communication session and communicated to the user for use in the next communication session. Neither of these relate to a count of occurrences of a communication event. The newly cited reference, Bongard, discloses a system in which identical tables are maintained at a transmitter and receiver, successive values of the tables following "a random or complex succession" (col. 2:49). Upon each transmission/reception the current value is incremented to the next value. However, nowhere does Bongard teach that an actual count of communication events is maintained, or that the authentication value is generated as a function of this count. Rather, Bongard only teaches shifting to a next entry of a lookup table based upon each (single) communication transmission/reception. Unlike Bongard, the count value is critical to the presently claimed invention (of claims 16-19 and 38-41). Further, unlike Bongard, the claimed invention will maintain the same authentication value for all communications between communication events, while Bongard is constantly forcing a change "after each individual emission."

In addition, it is a key feature of the remaining claims (20-37 and 42-59) that a dialed digit (or other target unit id number) is used in generating or verifying an authentication message. These dialed digits are transmitted along with the authentication message (see, e.g., claim 20). None of the cited references disclose such features, and thus cannot render the claimed invention obvious.

Finally, the claims were rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 5,239,294. Enclosed is a terminal disclaimer, thus obviating this rejection.

In view of the foregoing amendments and remarks, withdrawal of the examiner's rejections and favorable reconsideration of the present application is respectfully requested. If there are any question or comments regarding the present application, please do not hesitate to contact the undersigned by telephone or facsimile.

Respectfully submitted,

By 

Kevin A. Buford
Registration No. 34,786
Phone: (708) 576-0379
Fax: (708) 576-3750

24 1995
PAT

PATENT APPLICATION

RECEIVED
AUG 19 1995
COMMERCIAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

8/11/95

APPLICANTS: Flanders, et al.

EXAMINER: Zimmerman, B

SERIAL NO.: 08/295,173

GROUP: 2211

FILED: 08/22/94

CASE NO.: CE02132RP04

ENTITLED: Method for Authentication and Protection of Subscribers in Telecommunications Systems

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on 7/19/95

(Date of Deposit)

Motorola, Inc.

Name of applicant, assignee, or Registered Rep

Rebecca Miller 7/19/95

Signature

Date

Motorola, Inc.
Corporate Offices
1303 E. Algonquin Road
Schaumburg, IL 60196
July 19, 1995

AMENDMENT UNDER 37 CFR 1.115

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

In response to the Office Action dated June 5, 1995, please enter the following amendment. Reconsideration is respectfully requested.

IN THE CLAIMS:

Please amend the following claims:

In claim 20, lines 3, 6, 8, please delete "dialed".

In claim 24, lines 4, 6, 8, please delete "dialed".

In claim 29, lines 8-9, please delete "intermediate communication unit", and insert --communication system--.

In claim 46, line 3, please delete "receiver means for" and insert --a receiver unit--.

In claim 46, line 7, please delete "processor means for", and insert -- a processor --.

In claim 47, line 4, please delete "means for".

In claim 49, line 2, please delete "means" and insert --unit--.

In claim 50, line 2, please delete "means".

REMARKS

Obvious - Type Double Patenting

Referring to paragraph 2 of the Office Action, Applicant has enclosed a terminal disclaimer as requested by the Examiner. Thus, claims 16-19 and 38-41 which were only rejected based on obvious type double patenting are allowable.

Prior Art

Referring to paragraph 4 of the Office Action, Applicant respectively traverses the rejection under 35 U.S.C. §103 based on White in view of either Howard or Noble. First, Applicant wishes to thank the Examiner for granting an interview to discuss claims 20-37, and 42-59. Applicant also thanks the Examiner for agreeing during the interview that each of these claims is in condition for allowance. As requested by the Examiner, Applicant presents the arguments discussed during the interview supporting allowance of each of these claims.

None of the cited references discloses or suggests, inter alia, providing information which uniquely identifies a target communication unit and generating an authentication message based on the information. For example, claim 20 includes the steps of providing digits which uniquely identify a target communication unit and

generating an authentication message based on the digits. Since none of the cited references discloses or suggests either of these limitations, independent claim 20 is in condition for allowance. Likewise, independent claim 24 which includes the steps of receiving an authentication message and at least part of a plurality of digits which uniquely identifies a target communication unit is also allowable.

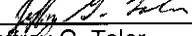
Similarly, none of the cited references discloses or suggests the combination recited in independent claim 29. Specifically, none of the cited references discloses or suggests providing information bits which uniquely identify a target communication unit. Further, none of these cited references discloses or suggests generating an authentication message as a function of the information bits. Therefore independent claim 29 is similarly allowable. Likewise, independent claim 33 which recites receiving an authentication message and a plurality of information bits which uniquely identifies a target communication unit where the authentication message is derived from the information bits is allowable.

Independent claims 42 and 46 are apparatus claims containing digit and authentication message limitations similar to those found in claims 20 and 24. Therefore, claims 42 and 46 are allowable for the same reasons as discussed above for claims 20 and 24. In a similar manner, apparatus claims 51 and 55 correspond to method claims 29 and 33 discussed above and are also allowable. Since each of the independent claims are allowable each of the dependent claims are also allowable.

In conclusion, Applicant has overcome each of the Examiners rejections. Each of the pending claims in this application is therefore in condition for allowance and early notice to this effect is earnestly solicited. If, for any reason, the Examiner is unable allow the application on the next office action and feels that a telephone conference would be helpful to resolve any remaining issues, the Examiner is respectfully requested to contact the undersigned attorney at (708) 576-0053.

Respectfully submitted,

Flanders, et al.

By 
Jeffrey G. Toler
Attorney for Applicants
Registration No. 38,342
Phone: (708) 576-0053
Fax: (708) 576-3750