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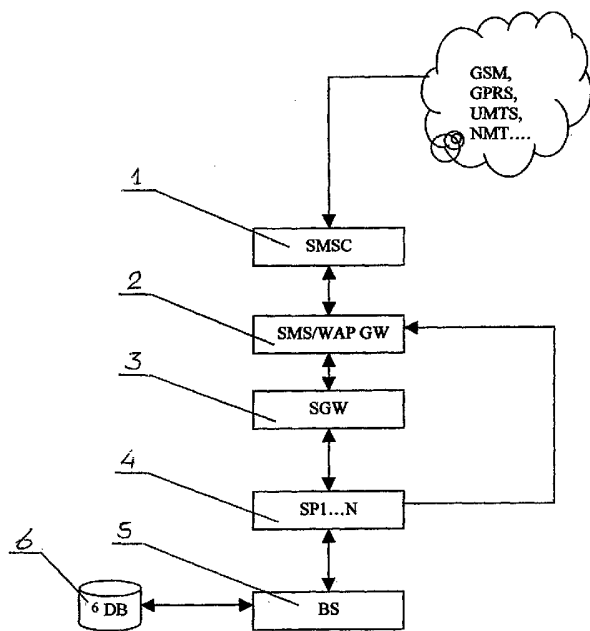
(71) Applicant and  
(72) Inventor: IVANOV, Ventzislav [BG/BG]; 9, Tzvetnica Str., 1360 SOFIA (BG).

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(74) Agent: NEYKOV, Neyko; 58, Vorino Str., app.2, 1680 SOFIA (BG).

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(54) Title: IMPLEMENTATION OF GAMES WITH A VERY LARGE NUMBER OF PLAYERS IN REAL TIME



(57) Abstract: The invention refers to method and system for implementation of mass games and services in real time, in particular to method for carrying out a game - lotto by using telecommunications facility, and may be applied in the entertainment business for organizing and carrying out of mass games. The advantages of the invention consist of the possibilities for fast, mobile, effective and uninterrupted access to the requests distribution and management system. The system ensures a possibility for the participants to perform monitoring on the implementation of the made requests and the performed payments for participations. Another advantage of the system is the increased reliability and security of the requests and the payments: The method includes purchasing of a voucher in advance, while by using his mobile phone, the participant sends a short message (SMS), which contains the figures, on which the participant has put his stake, and the number of the purchased voucher, with which he participates in the game. The message is received in the center for receipt of requests, wherefrom it is sent to a communication system, which translates it and sends the number of the participant, the information, contained in the message and the game, for which the message refers to, to the services administering system, automatically, or with the help of an operator.

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## IMPLEMENTATION OF GAMES WITH A VERY LARGE NUMBER OF PLAYERS IN REAL TIME

### Field of the invention

The invention refers to method and system for implementation of mass  
5 games and services in real time, in particular to method for carrying out a  
game – lotto by using telecommunications facility, and may be applied in  
the entertainment business for organizing and carrying out of mass games.

### Background of the invention

Various games are known, which are carried out by using of services,  
10 provided through mobile telecommunication facilities, for example,  
sending of SMS messages. In most of the games the potential players – the  
users of mobile telecommunications facilities use their capabilities to send  
an answer to a question, asked in advance, where by the help of specialized  
software the number of those, who have submitted correct answer, is  
15 determined, as well as the number of the winners and the type of the prizes.

A system is known for management of play machines – WO0258020  
/PCT, where the management of the carrying out of particular game on a  
play machine is performed through communication, established on the  
basis of short messages transmission.

20 A method for organizing games is known – WO02066130/PCT, where by  
a public media – television, radio, etc. questions are asked to a large  
number of potential players and those, who wish, send answers to the  
questions through SMS, to a system, especially developed for the purpose.

A centralized system is known for management of entertaining games P  
25 No. 6416414 – USA, where the communication between the separate  
terminals and the central is established based on data transmission through  
use of short messages (SMS).

An entertaining game is known, P. No. 2002104007 – USA, where by use  
of short messages (SMS) a question is sent to a mobile device (participant  
30 in the game), and provided the latter answers correctly, another question is

sent, etc. The prize the player may receive depends on the number of the questions he has answered correctly. If the player wins, a special number, called voucher is sent to him through SMS, and by presenting of this to the game organizers, the player receives his prize.

5 In the indicated patent publication both a system for implementation of stake through telecommunications facility, as well as through using of installed telecommunications network, for example wireless application protocol (WAP). In the proposed method there exists a possibility to use the telecommunications operators only for information transport, thus  
10 avoiding the need for identifying and billing of the player by the phone operator WAP.

It is possible to use also multimedia messaging services (MMS) for implementation of stakes through an operator, which means that a "direct contact" with the organizer of the gambling or other game. In the indicated  
15 patent publication there a system is presented for performing of payments for implemented stake, including by use of different methods for billing.

The lottery game "Interloto" is known, Reg. No. 105540 – BG, which refers to carrying out of lotto-game, where the holders of telecommunications facilities may participate in the lotto-game by making  
20 a stake, that is, define a combination of figures and numbers, with which to participate in the playing of winning combinations. The known game is implemented in virtual space, where for placing a stake, representing a combination of figures, there are two options provided – the first presumes implementation of stake by a user through sending of SMS from a mobile  
25 telecommunications facility to a predefined telephone number, after which, at drawing the winning numbers, the winnings and their amounts are determined.

The staking may be performed also by using a global communications network /Internet network/, through especially developed web page, where  
30 the user has to establish connection with the network, to enter into the indicated page and to perform the staking of the numbers chosen by him.

The described known lottery game "Interloto" contains significant restrictions, which are grounds for the game to be defined as insufficiently comfortable and safe to be used by the mass user, who the majority of the participants in such games with stakes are. For example, a disadvantage of the known game is the fact, that its implementation is not sufficiently reliable, because only one technical possibility is envisaged for performance of stake and no variant is indicated for performance of stake during temporary lack of possibility for sending of SMS message or possibility for connection with the network. At the same time, in the known game "Interloto", the security of the access, with the purpose to implement a stake through telecommunications facility or network, is not guaranteed. Another disadvantage is the existing interrelation between the organizer of the gambling game and the telecommunications operator, whose subscribers perform stakes through short messages (SMS), as well as between registration through Internet and implementation of stake by sending SMS message. It may be indicated also as a restriction the SMS message to be sent to a particular phone number.

### **Summary of the invention**

Having in mind the presented above known level of techniques in the considered field, the purpose of the present invention is to offer a game – telelotto, which shall allow a fast, easy, effective method for implementation of a stake by using of a telecommunications facility, at increased access security, while performing subsequent processing of the stakes and making of payment for participation in mass games.

The aim is solved by a method, which is characterized by the fact that the stake is implemented by a device, applied in telecommunications environment that supports short messages /SMS, MMS, WAP, etc/, or other communications environment, for example global computer communications network – Internet.

The method, in accordance with the invention, provides establishment of connection between the device and system for automatic data processing,

where the submitted request is directed for distribution and management, while the latter includes identification, and through the data processing system validation is performed, representing a check for validity of data from the stake and request registration, while at the same time information  
5 is sent to the organizer of the game with subsequent billing of the request and a return notification is sent to the participant with confirmation or rejection of the stake and its parameters.

The method envisages also a possibility to implement a second identification level, or security level by adding data encoding algorithm to  
10 the device, loaded in personal chip card, SIM card or another identification carrier, compatible with device, applicable in telecommunications environment or Internet.

The method, in accordance with the invention, allows the requests distribution and management to be performed automatically and/or by  
15 operator.

In accordance with a variant implementation of the method, the participant sends a request for participation, including the stake data. After sending of the request a check is performed within the automatic processing system for data validity, after which they are submitted for  
20 additional processing according to the rules of the particular game or service, while at the same time information is sent to the organizer of the game or service (on-line or off-line).

The requests distribution and management system, in accordance with the invention, includes a connection between a device, applicable in  
25 telecommunications environment or Internet, and a system for automatic receipt of the requests, which, after their receipt, are distributed to a requests management system. The requests management system is connected to a billing system, which has a connection to information database, which may contain the parameters of the game logic, various data  
30 and tariffs for participation, information about performed requests or various user profiles.

In accordance with a preferred implementation of the invention, the billing system is oriented towards operation with vouchers, defined in advance, corresponding to the value of one or more stakes. While participating, the value, to which the voucher corresponds, changes in accordance with the game's logic. For the purpose, a vouchers management system is added to the requests distribution and management system, and to the billing system.

In accordance with another variant implementation of the invention, a payments registering system, allowing flexible collecting of the amounts of the stakes, is connected to the requests distribution and management system and to the billing system.

The system allows also a connection with a billing system of a telecommunications operator, for performance of payments for the stakes through users accounts of the participants to the telecommunications operator.

A variant implementation of the system envisages the requests transmitting devices to connect automatically or via operator to a requests reception center, wherefrom the requests are submitted to the distribution and management system.

The system allows the submission of requests to be performed by one communication device, for example telecommunications device, while the result from their processing to be received on another, for example through Internet network.

The method and the system for implementation of stakes payment for participation in mass games, in accordance with the invention, provide opportunities for unlimited participation in various playing schemes. The advantages of the method consist of the possibilities for fast, mobile, effective and uninterrupted access to the requests distribution and management system. The system ensures a possibility for the participants to perform monitoring on the implementation of the made requests and the performed payments for participations. Another advantage of the system is

the increased reliability and security of the requests and the payments, due to its ability to use built-in mechanisms for security of the contemporary telecommunications network and Internet and use of additional mechanisms for identification, such as personal codes and/or encrypting  
5 algorithms for data transmission.

### **Brief description of the drawings**

One sample implementation of the method and the system for organizing of mass games, in accordance with the invention, is presented with the help of the diagrams, accompanying the description, where:

- 10 • Fig. 1 – represents block diagram of the system for mass games;
- Fig. 2 – represents block diagram of the system as in Fig. 1, with possibilities for receiving of requests from a operator in an information center, as well as possibilities for connection with Internet;
- 15 • Fig. 3 – represents block diagram of the system as in Fig. 2, with possibilities for implementation of payments with vouchers, by including a vouchers management system;
- Fig. 4 – represents block diagram of the system as in Fig. 3, enlarged with possibilities for payment through payments registering system.

### **Ddescription of the preferred embodiments**

Sample implementations of the system in accordance with the invention are presented with the help of block diagrams, showing the particular modular elements and the connections between them, while the described implementations do not limit the options for implementation of additional  
25 connections between the particular modules, allowing enlarging of the functional capabilities of the system, its security with reference to the access to information, as well as capabilities for access through various communications facilities.

The requests distribution and management system includes center for receipt of requests 1 /SMSC/, which main function is redirecting of the requests, received from the telecommunications environment, to communication system 2 /SMS/WAP GW/. The SMS/WAP GW system serves as interface between the center for receipt of requests and the services administering system 3 /SGW/. The services administering system 3 performs control on the requests management, while ensuring administering of the requests and system security protection by enlarged identification functions and logic control functions of the natural interrelations of the requests. Depending on the implementation of the services administering system 3, the module, managing information center 7 (IC) may be integrated to it. The availability of information center enlarges the functional capabilities of the services administering system 3, where thanks to the information center it is possible for the requests to be managed also by an operator. Besides, through the information center 7 it is possible for the services administering system 3 to be connected to Internet or to another communication network.

After successful identification of the request, the services administering system 3 dispatches the request to a services management system 4 /SP1 ... N/, which takes over its further management. This system consists of modules, managing the logic of each of the services, while their number is unlimited. Upon successful implementation of a request and depending on the game's logic, the services management system SP1... N sends information about this to the billing system 5 /BS/.

The billing system 5 /BS/ processes the income information and performs the billing, according to the game's logic, user profile, or other billing parameters, which are stored in the information base 6 /DB/. Data in the information base 6 are provided by the organizers of the game. Upon successful billing the billing system 5 returns information about that to the services management system 3, which, through SMS/WAP GW may send notification about that to the participant. The billing system 5 contains also



functions for performance of credit control, thus performing management on the participations and their payment. BS ensures capability for connection with billing systems of telecommunications operators, through which the information about successfully implemented requests is transmitted to the operator, while the payment for participation is performed by paying the user accounts of the participants at the telecommunications operator.

In accordance with one variant implementation of the invention, both the services management system 3 and the billing system 5 send information about successfully implemented requests to the vouchers management system 8 /VMS/. The vouchers management system 8 serves for performance of payments through predefined vouchers, corresponding to the value of one or multiple participations. When participating, the value, to which the voucher corresponds, changes according to the game's logic.

In accordance with another variant implementation of the system, the possibilities for payment are additionally enlarged by connecting a payments registering system 9 /PS/. The payments registering system 9 serves for marking of the incoming payments for the billed participations by looking for delayed, partial or duplicate transactions. The payments registering system 9 serves also for elaboration of the required documents, accompanying the payments, for backup of these documents and issuing of their copies upon request. This system 9 is connected also to the credit control functions of the billing system 5, through which control on the payments of the participations is performed.

## **USE OF THE INVENTION**

The application of the method and the system for organizing of games and services in real time may be presented by the following example:

In order for the game SMS-LOTTO to be organized, it is necessary to offer to the potential participants in the game vouchers of various values, which may be performed through the shops. The participant purchases a voucher, thus pre-paying the value of his stakes. The participation in the

game is performed in the following manner. By using his mobile phone, the participant sends a short message /SMS/, which is received in the center for receipt of requests 1 /SMSC/. The message contains the figures, on which the participant has put his stake, and the number of the purchased voucher.

5 The center for receipt of requests 1 sends this message to communication system 2 /SMS/WAP GW/, which translates it and sends the number of the participant, the information, contained in the message and the game, for which the message refers to, to the services administering system 3 /SGW/, automatically, or with the help of an operator, which identifies the request,

10 where in case of successful validation it sends the request to SP1 ... N. The module, which is responsible for the game SMS-LOTTO in SP1... N, receives the request and sends the participation parameters to the billing system 5 /BS/, which through DB determines the participation value. BS submits this value to SP1 ... N, from where this value, together with the

15 voucher number are sent to VMS for validation. VMS checks the voucher's validity and whether the value, to which he corresponds, is enough for the implementation of the stake. After that VMS sends the validation result to the services management system 4 /SP1 ... N/. Upon successful validation the services management system 4 implements the stake in accordance with

20 the rules of the game, records the participation data in DB and sends information about that to VMS. On the basis of this information VMS deducts the value of the voucher by the sum of the stake and indicates to the services management system 4 the new value of the voucher, while sending through SMS/WAP GW a message to the participant about the

25 successful processing of the stake and the new value of his voucher.

Besides with the help of vouchers, the game may be implemented through organizing of permanent clients database of participants. In this case the participant, using his mobile phone, sends a short message /SMS/, which is received in the center for receipt of requests SMSC. The message

30 contains the figures, on which the participant has put his stake. SMSC sends this message to SMS/WAP GW, which translates it and sends the number of the participant, the information, contained in the message and

the game, for which the message refers to, to SGW, automatically, or with the help of an operator. SGW identifies the request, where in case of successful validation it sends the request to the services management system 4.

5 The module that is responsible for the game SMS-LOTTO in the services management system 4 receives the request and sends the participation parameters to the billing system 5 /BS/, which through the information database 6 /DB/ determines the participation value. The billing system 5 submits this value to the services management system 4, which implements  
10 the stake in accordance with the rules of the game, records the participation data in the information database 6 /DB/ and through SMS/WAP GW sends a message to the participant about the successful processing of the stake and its value. Besides, the services management system 4 /SP1 ... N/ sends the information about the stake to PS, where information is contained about  
15 all stakes of the participant, payments and liabilities on them and in case of new payments coming, they are recorded.

In case of connection to billing systems of communications operators or providers, the billing system 5 /BS/ sends the information about the stake to  
20 hem, where in this case the payment is performed through the payment systems of the operators themselves through user accounts of the participants.

Additional extension of the game is the possibility for receipt of requests not only through SMSC, but also through a global communications network, for example Internet. In this case from Internet the stake is  
25 received in the information center 7 /IC/, from where it is submitted automatically, or with the help of an operator, to the services administering system 3 /SGW/ for validation. Upon successful validation the management of the stake is performed in accordance with the processes as described in any of the above examples.

## CLAIMS

1. **Method** for implementation of mass games, where the stake for participation in a game is performed by a device, applicable in  
5 telecommunications environment that supports short messages /SMS, MMS, WAP, etc./, or other communications environment, the characteristics being that the device establishes connection with a system for automatic data processing, at which a submitted request for participation in the game is identified and directed for distribution and  
10 management, while through the system for automatic data processing a check is performed for the stake data validity, the request for participation is registered, and at the same time with this information is sent to the organizer of the game (on-line or off-line) with subsequent billing, while notification is returned back to the participant with confirmation or  
15 rejection of the accepted stake and its parameters.

2. **Method** in accordance with claim 1, being characterized with this, that the identification may be implemented at two security level by adding to the device an algorithm for data encoding, loaded in a personal chip card, SIM card, or other identification carrier, compatible with a device that is  
20 applicable in telecommunications environment, or Internet.

3. **Method** in accordance with claim 1, being characterized with this, that the distribution and the management of the requests to be performed automatically and/or by an operator.

4. **System** for implementation of mass games in accordance with the  
25 method as defined in claim 1, including a device, applicable in telecommunications environment or Internet and a system connected to it for automatic receipt of requests for participation, being characterized with this, that the submitted and identified requests for participation are distributed to a billing system and with a information database, where the  
30 latter contains the parameters of the game's logic, data and tariffs for

participation, information about the implemented requests or various clients profiles.

5 5. **System** in accordance with claim 4, being characterized by the fact that the billing system may operate with predefined vouchers, corresponding to the value of one or multiple stakes, while in case of participation the value, to which the voucher corresponds, is changed in accordance with the game's logic.

10 6. **System** in accordance with claim 4, being characterized with this, that an additional system for vouchers management is connected to the requests distribution and management system and to the billing system.

15 7. **System** in accordance with claim 4, being characterized with this, that according to another variant implementation of the invention, a system for registering of payments, which allows flexible collecting of the value of the stakes, is also connected to the requests distribution and management system and to the billing system.

8. **System** in accordance with claim 4, being characterized with this, that the billing system is connected to a billing system of a telecommunications operator for performing of the payments for the stakes through users accounts of the participants at the telecommunications operator.

20 9. **System** in accordance with claim 4, being characterized with this, that the requests transmission devices are connected to a center for receipt of the requests automatically, or through an operator, wherefrom the requests are submitted to the distribution and management system.

25 10. **System** in accordance with claim 5, being characterized with this, that the submission of requests is performed by one communications device, while the result from their processing to be received from another device.

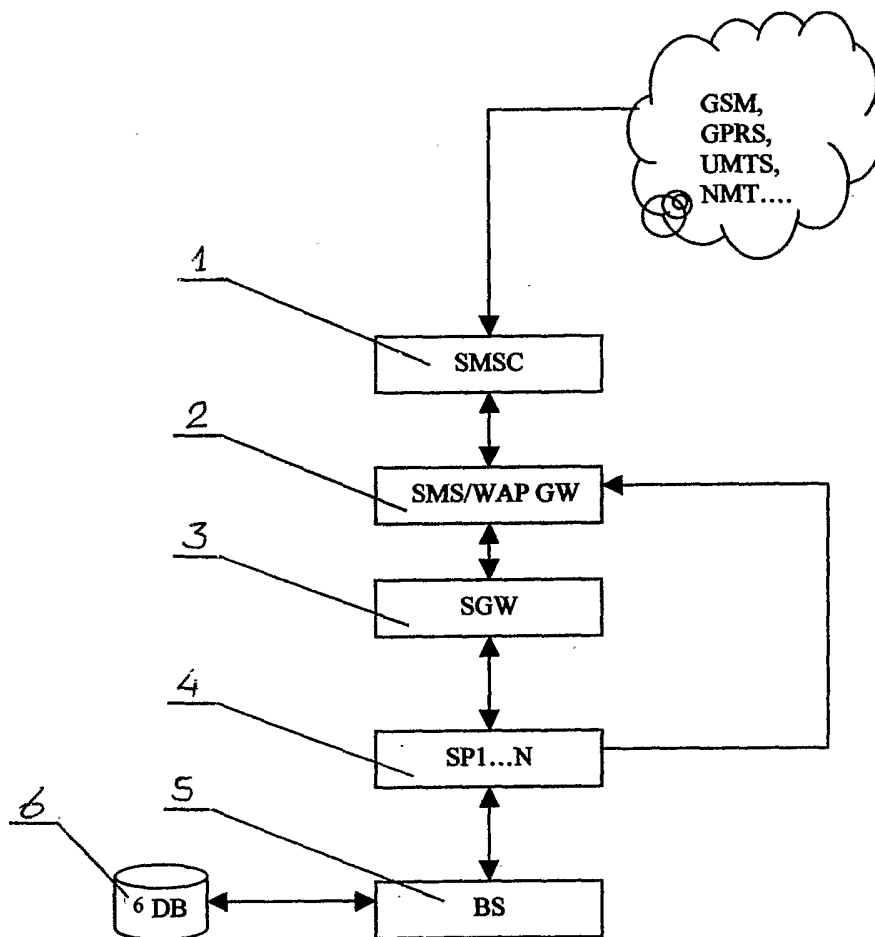


Fig. 1

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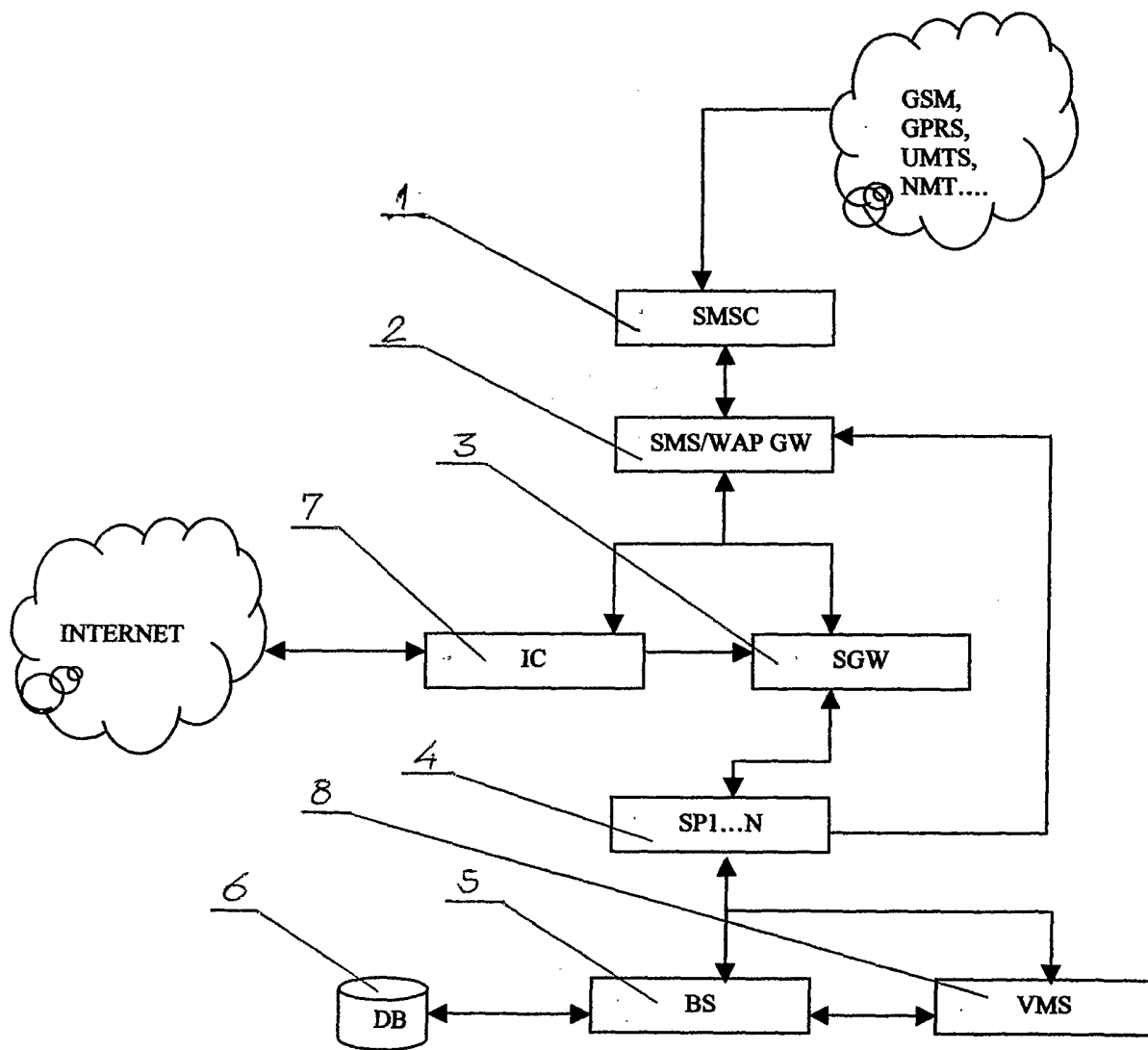


Fig. 2

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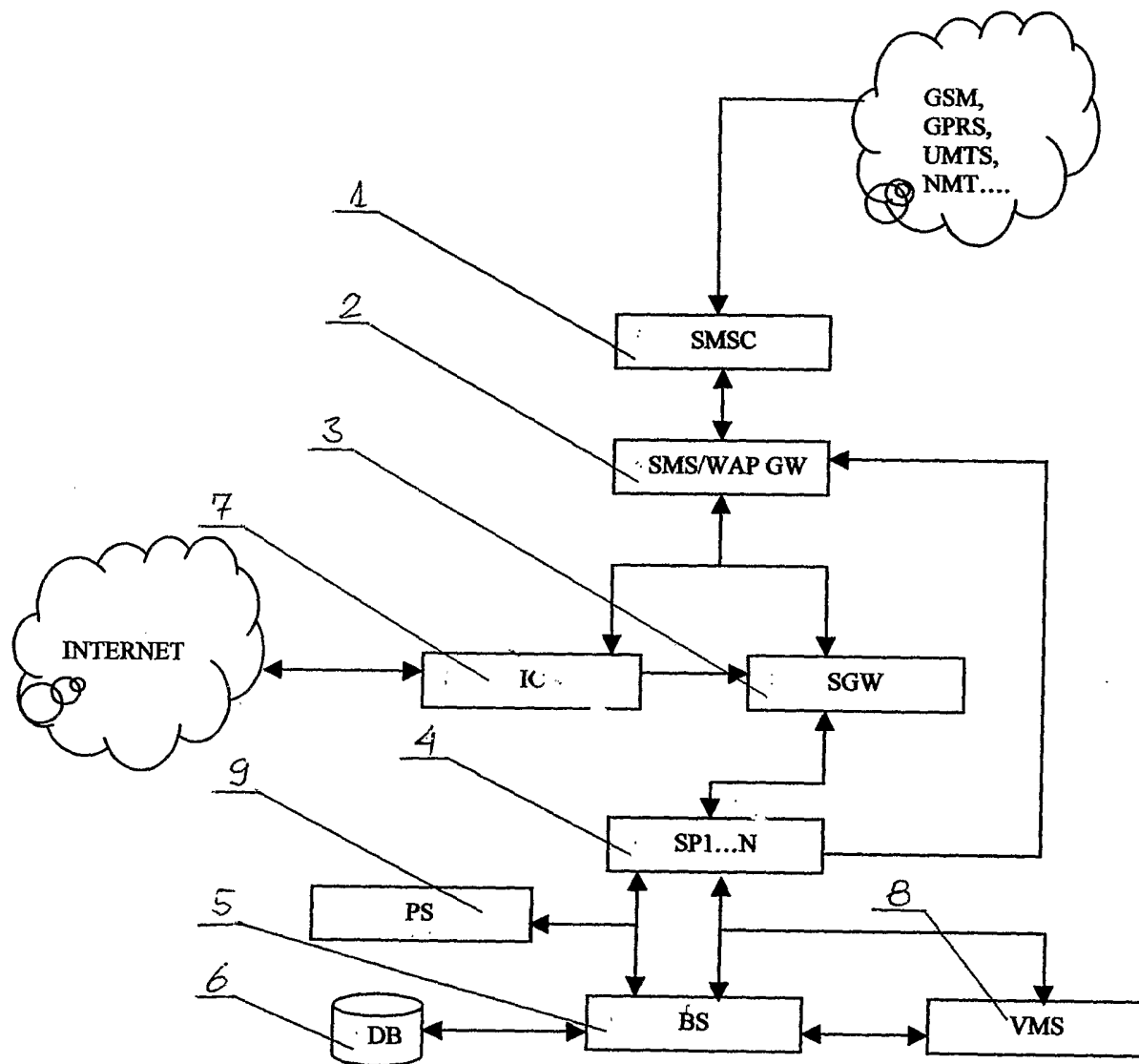


Fig.3



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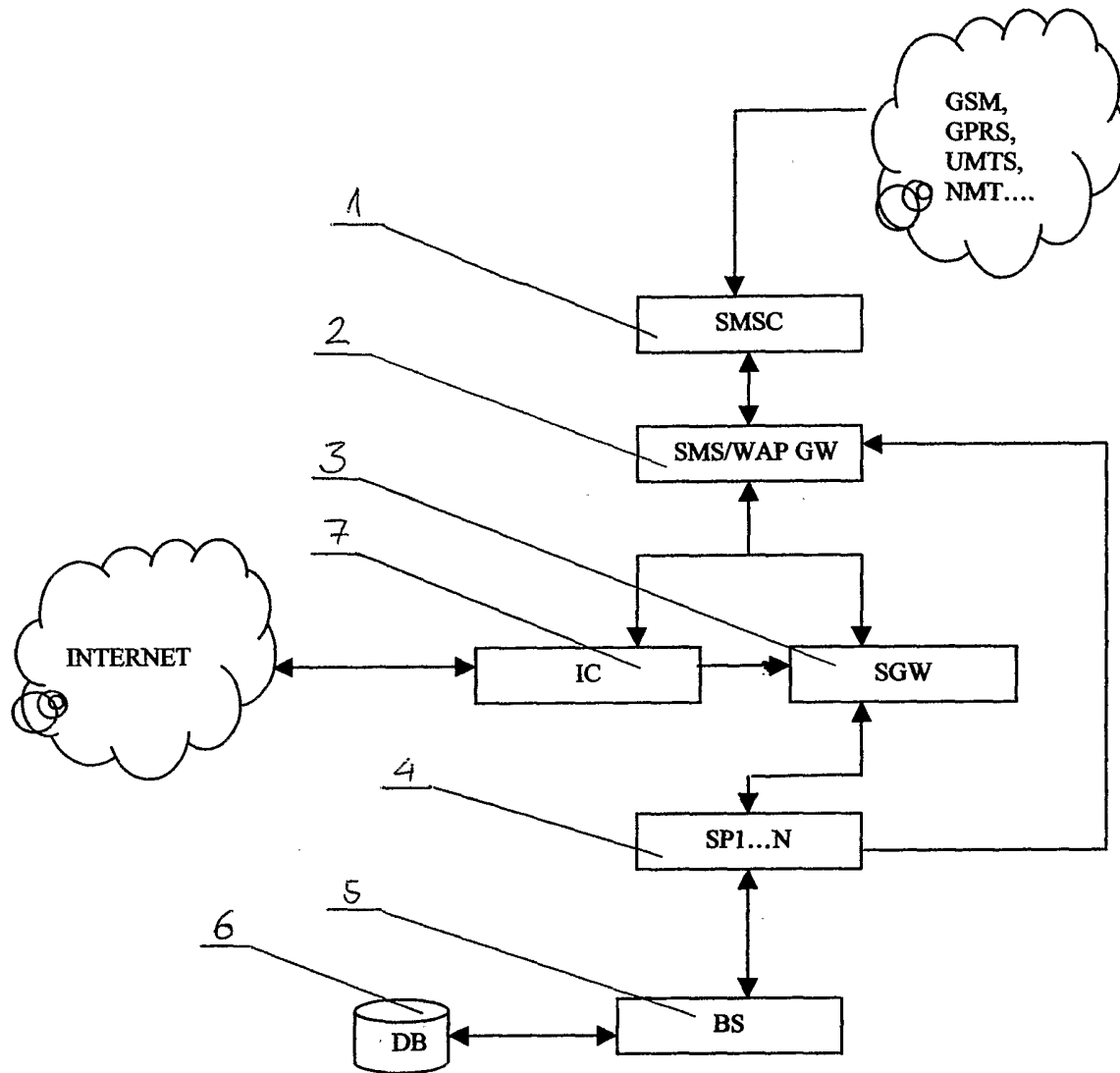


FIG. 4

## INTERNATIONAL SEARCH REPORT

International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G07F17/32 G07C15/00

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 7 G07C G07F

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

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X	FR 2 830 353 A (CP8) 4 April 2003 (2003-04-04) page 4, line 19 -page 14, line 31 ---	1-10
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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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

Lavin Liermo, J

INTERNATIONAL SEARCH REPORT

International Application No

PCT/BG 03/00031

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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