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(54) Gaming system using the serial number of a banknote for verification purposes and claiming prizes

(57) Subiect of present invention are method and related systems to implement playing, in telematic and automatic modality, for betting, gambling, lotto, lotteries and any other games of chance, in such a way that will allow the player to keep a paper document as proof of identification and certification of the game transaction he has performed. This paper document will be unique and not forgeable, so that the original player will be able to prove indisputably to have all the rights for prize claiming, in case of winning.

The method proposed, in addition to the use of the various modalities for computerised telematic transactions, via phone or via PC, is focused on the use, with the aim of validating and identifying the performed game transaction, of the serial number of a banknote in legal circulation. Thus, the banknote will constitute the unique and certain certification of the performed game transaction for eventually claiming the prize, in case of winning.

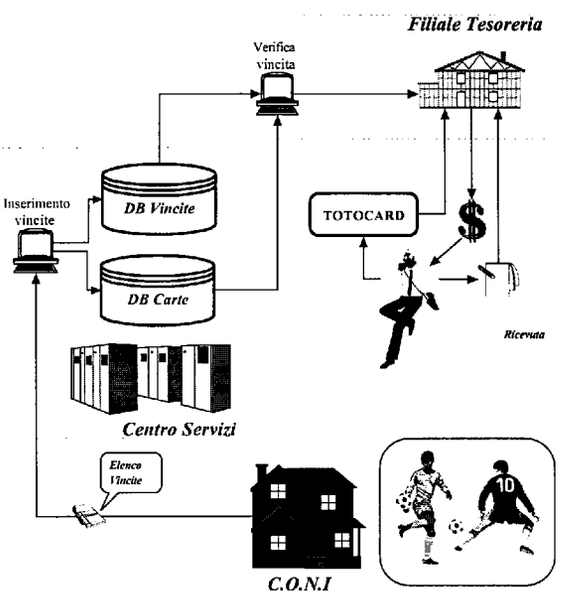

Fig. 7

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Description

Field of the invention

[0001] Subiect of present invention are method and related systems to implement playing, in telematic and automatic modality, for betting, gambling, lotto lotteries and any other games of chance, in such a way that will allow the player to keep a paper document as proof of identification and certification of the game transaction he has performed. This paper document will be unique and not forgeable, so that the original player will be able to prove indisputably to have all the rights for prize claiming, in case of winning.

[0002] The method proposed, in addition to the use of the various modalities for computerised telematic transactions, via phone or via PC, is focused on the use, with the aim of validating and identifying the performed game transaction, of the serial number of a banknote in legal circulation. Thus, the banknote will constitute the unique and certain certification of the performed game transaction for eventually claiming the prize, in case of winning.

[0003] Moreover, in case the game transaction payment is done using an anonymous modality such as pre-paid cards, it is foreseen the insertion in those cards of an identification checking code, to be kept hidden and secret, as further protection against frauds aimed at the use of the available credit to play and to acquire the rights in case of winning. In such a case, the mentioned identification checking code will be uncovered and checked at the presentation, for prize claiming, of the card together with the banknote.

[0004] Furthermore, it is foreseen that the player, besides keeping a paper document identifying the performed game transaction, is enabled to receive at any moment, on his request, a report with the contents of the game transaction archived in the telematic system, identified by the banknote serial number, in voice (via phone) or in writing (via fax or e-mail).

[0005] Therefore, the proposed invention allows to implement telematic systems, aimed at supporting with automatic modalities performance of games of chance, in which the problematics related to the telematic game transactions security and to their certification for the claiming of the prize, in case of winning, are solved.

[0006] Moreover, the proposed invention can be applied to all telematic services systems in which the requirement of certifying in a certain and unique way the performed transactions is a relevant issue.

State of the art

[0007] Until now many Telematic Systems for playing, with automatic modalities, in games of chance have been invented and some of them have been subject of requests and granting of patents at an international level.

[0008] In these previous inventions, mainly the main components of telematic services have been used in various combinations focused on pre-paid cards in such a way to allow solving specific problems related with the telematic playing in general or with telematic playing in specific games of chance.

[0009] Particularly, solutions have been invented that identify the pre-paid card used and every single game transaction performed with such card through a combination of codes. Specifically, solutions have been invented based on "use and throw" codes supplied to the player with the pre-paid card in order to avoid the use of said combination of codes for further playing by third parties that might intercept them in occasion of a game transaction. Therefore, each of these "use and throw" codes, used only once, identifies in a biunivocal way a single game transaction.

[0010] These solutions generally undergo the following drawbacks:

- the intercept by third parties might give them the capability of presenting a reproduction of the pre-paid card to collect the prize.
- the number of game transactions which can be performed with the pre-paid card is limited by the number of "use and throw" codes supplied. Therefore, in many cases it might result difficult to supply as many "use and throw" codes as the maximum number of minimum cost games transactions allowed with the start up available amount in the pre-paid card, or, alternatively, to manage with credits or rembursement the residual available pre-paid amount still to be played in a card, once all supplied "use and throw" codes have been utilised.
- It is not simple and straightforward the management of solutions alternative to the use of pre-paid cards, based on payment of the game transactions through credit/debt cards or any other way of crediting.

[0011] As reference, patents with the above mentioned features and problems are, for instance:

Patent Japan P.O.	07160791
Patent Japan P.O.	09006864
Patent U.S.	5083272
Patent U.S.	5327485

Description of the invention

[0012] The Method and Systems to implement playing, in telematic and automatic modality, for betting, gambling, lotto, lotteries and any other games of chance, subject of the present invention, allow to over-

come the above mentioned issues.

[0013] The main feature is constituted by the use of a serial number of a banknote to identify the game transaction and of same banknote to certify the right for claiming the prize, in case of winning. Actually, in such a way, the player keeps a paper document which is unique and not forgeable by third parties who, having intercepted the game transaction, might attempt to claim the prize in case of winning.

[0014] Another relevant feature of this invention will be effectively used in all cases in which the payment of the game transactions is done through systems in which it would not be possible to identify the player, like through anonimous pre-paid cards, while when the game payment is done with credit cards or any other kind of nominally assigned payment such feature is not necessary. For instance, in pre-paid cards a secret hidden checking code will be inserted, which has to be kept hidden until the presentation for claiming the prize, in case of winning. This feature is aimed at protecting against frauds by third parties who, having intercepted the codes identifying the pre-paid card, emulate, by forgery, the card. Thus, without the above mentioned feature of the present invention, such fraudolent third parties would be enabled to play using residual credit of the intercepted pre-paid card while having the possibility of claiming for the prize, in case of winning with their game transaction.

[0015] The proposed invention is therefore maximally protecting from frauds telematic games, by the double warranty given by the exploitation of two different security codes:

- A code chosen autonomously by the player, i.e. the banknote serial number. This code allows the same player to keep a paper document, i.e. the banknote, to oppose to any claims of third parties who did not perform the game transaction.
- A secret code assigned by the Agency who manages the telematic game. The assigned secret code guarantees the player and the Agency against frauds aimed at using the pre-paid card residual credit, as a forgery of the card following the other codes interception would not allow anyway to claim a prize. Naturally, third parties who might succeed in knowing the secret code of a prepaid card which has been used by the legal owner for a winning game transaction would not anyway be enabled to claim the prize without the related banknote.

[0016] To the above reported basic features, in some peculiar system implementations other features might be added, such as:

- checking of the contents of the game transactions, on player's request, performed via same telematic systems. The player, after having proved at the beginning of the checking transaction his identity, for instance by the identifying codes of the pre-paid card, and identified the game transaction, by the serial number of the related banknote, will be enabled to listen to a phone automatic voice message or to receive a written message, via fax or via e-mail, on the game transaction contents.
- additional protection with "use and throw" codes supplied to the player, for instance together with the pre-paid card. Such protection is aimed against third parties who, having intercepted the pre-paid card identifying codes, would like to use the card residual credit even if only for vandalism. Actually, they would not be able to get any advantage from such fraudolent action, thanks to the effectiveness of the above mentioned main protection features. On the other side, it is assumed that game transactions made using standard personal credit/debt cards or any other personal credit system would anyway be protected by standard data security procedures inherent in the related telematic financial transactions, and therefore no need for such additional protection would generally apply to them.

[0017] Various possible systems of implementation of the proposed method are based, additionally to the above reported features, on the use of the usual modalities for telematic transactions, either by phone or by PC, based on configurations and operative flows that will be in general evident to the experts in the field from what has been reported in the above and from the detailed description of a specific application example reported in a following chapter.

[0018] Telematic Systems implemented on the basis of the present invention will therefore allow to perform game transactions in a completely automatic way.

[0019] Through such Systems playing services will:

- be available 24 hours a day
- allow game transactions to be performed by players from everywhere, also from foreign countries
- allow the managing Agengies to extend the playing deadline until short time before events start up.

[0020] Actually, such Systems have the peculiarity of allowing the users to perform the game transactions through the use of a normal telephone or the use of a Personal Computer, supplying highly user friendly and geographically distributed services.

Brief description of the drawings

[0021]

Figure 1 Pre-paid card, Part 1 - front side
Figure 2 Pre-paid card, Part 2 - front side
Figure 3 Pre-paid card, Part 1 - back side
Figure 4 Pre-paid card, Part 2 - back side
Figure 5 Pre-paid card, layout before the opening
Figure 6 Management by the Service Centre of the

production and distribution of the pre-paid cards and of the game transactions.

Figure 7 Operative flow of prize payment

Figure 8 General System Architecture

Figure 9 Service Centre Architecture

Detailed description of a specific application example

[0022] As an implementation example of the above proposed method the description of the specific application to "Concorsi Pronostici" betting games on football matches, managed in Italy by Comitato Olimpico Nazionale Italiano, CONI. CONI's "Concorsi Pronostici" on football matches are structured in three main betting games: Totocalcio, TotoGol and Totosei.

[0023] The Telematic System is structured to supply services with the following features:

- collection of the betting transactions by phone (through DTMF or pulse signalling and/or by voice recognition) or via Internet:
- payment of the betting transaction through a pre-paid card
- automatic validation of the betting transaction (extreme attention has to be paid to security problems and to safeguarding on legal issues)
- archiving of betting transaction in due time.
- registration of credits for the betting transactions and for prizes amounts in due time.

[0024] The service is managed by a "Virtual Broker Agency" that acts in perfect analogy with real Broker Agencies.

[0025] The structure of the Service is based on:

- SERVICE CENTRE;
- PUBLIC PHONE TRANSPORT NETWORK to access the service;
- use of pre-paid cards as guarantee for the payment by the player
- involvement of a TREASURER AGENCY (BANK) for the distribution of the pre-paid cards to the Broker Agencies, for managing the financial flow related to the games transactions and for the payment of minor prizes.

[0026] The SERVICE CENTRE deals with the organisation and the informatic management of the service; particularly it performs the following tasks:

- production and management of pre-paid cards
- management of the database on pre-paid cards by batches
- management of the automatic information system on the telematic game to the players
- management of the virtual account associated to the pre-paid card credit
- collection and validation of the betting transactions
- archiving of betting transactions on unerasable informatic media,associated with the storage of identifying code
- management of the closing of the betting games session, with the production of files about the betting transactions, and delivery of informative and legal documents together with overall betting amounts to CONI
- management of the database on winning betting transactions per each games session

[0027] PUBLIC PHONE TRANSPORT NETWORK supplies service access particularly qualified by:

- geographical distribution
- global availability
- quality

[0028] The only network with the above reported characteristics in Italy is PLURITEL network of TELECOM, which allows to exploit the use of telephone and of most modern interactive media, maximising potentialities of betting services.

[0029] The computers of the Service Centre support the application which manages betting transactions and, through the Front End, interface with the phone network.

[0030] The service is supplied in similar way, independently from type of terminal being used to access it.

[0031] In relation to user's terminal (phone or Personal Computer), the Transport Network supports two different solutions:

- interconnection through PLURITEL network
- interconnection through INTERNET network

[0032] The service is based on a pre-paid card as way of payment by the player for his betting game to Virtual Broker Agency. The Virtual Broker Agency payment to CONI is made through direct bank transfer.

[0033] The access to the betting transactions is allowed only to owners of a pre-paid card, called TOTOCARD.

[0034] The pre-paid card, that in the following will be referred to as TOTOCARD, complies with the following features:

- it is identified and protected by unique unhidden and hidden codes and of course, to assure the service security
- they can be of one or more types by initial credit amount, as required by optimal service management.

[0035] The card is constituted by a paperboard folded in two and sealed by precut fringes so that only the two external back sides are visible; in Table 1 the configuration of TOTOCARD, structured in four sides, and the

contents of every side are shown.

[0036] The related operative flow is:

- After having bought the TOTOCARD, the holder tears off the precut fringes that sealthe card and opens the paperboard to access to the two internal front sides.
- Once the paperboard has been opened the card appears to be composed of two parts united with precut connection, to allow easy separation for security reasons of the two parts.
- The separation of the two parts permits at the holder to preserve separately the part (Part 1) containing the identifying number of the card (CARTID) and the part (PART 2) containing the PIN of the card (CARTPIN).
- The structure of the codes and card texture have been devised in analogy to bank systems and according to ABI regulations on credit cards.
- The two code numbers, the card identifying one and the card PIN, are associated so that they identify in an unique way the TOTOCARD. Both of them are necessary to perform the betting.

[0037] The player buys an unabridged card (Fig. 5). When the player buys the card, only the two external sides are visible, PART 1 and 2, which contain the following.

PART 1 - EXTERNAL SIDE (Fig. 3), contains:

THE SERIAL CODE NUMBER OF PRODUCTION (SERIALCOD)

[0038] It is a serial number composed of 12 digits, automatically assigned by the card manufacturer (Poligrafico), that identifies in a unique way the card and the batch of production of the same card.

[0039] This number is necessary to check and verify the production of the cards and to manage the whole phase of delivering.

[0040] The number is structured as follows:

- the first two digits encode the year of production
- the following seven digits encode the sequential number of production by year
- the last three numbers are the checking code of the previous nine numbers

INSTRUCTIONS TO ENCODE ALPHABETIC LETTERS BY PHONE KEYS DIGITS.

[0041] These instructions are necessary to encode alphabetic letters by digits, to help the user in transmitting, by a telephone, alphabetic letters.

[0042] On this side is shown the layout of a standard CCITT alpha-numeric phone keyboard, having alongside the following instructions:

Dial two digits for every letter:

First digit: number of the key

Second digit: position of the letter on the previously selected key

Example: A=2,1; V=8,3

"EXPIRATION DATE" OF THE CARD:

PART 2 - EXTERNAL SIDE (Fig.4), CONTAINS:

INSTRUCTION TO ACCESS THE SERVICE

[0043] To access the playing service dial the number 16413.

[0044] A recorded voice will answer you, welcome you and lead you during all the phases of the game.

[0045] It is possible to submit the data and to perform the choices required for playing using the keys of a normal phone, by following the automatic vocal menus of the system.

[0046] For further information dial up the following number: 16414

ADVERTISING

[0047] It is an empty space on the card that can be sold for advertising images and texts.

[0048] Once the precut fringes have been torn, the card can be opened and the two internal sides of PART 1 and 2 become visible, containing the following:

PART 1 - INTERNAL SIDE (Fig. 1) CONTAINS:

ONE IDENTIFYING CARD NUMBER (CARTID)

[0049] It is the identifying card number. This number is a numeric code constituted by three sets of four digits each, which allows the access to the playing procedure.

[0050] The CARTID contains checking characters that allow to verify the correctness

[0051] of the CARTID. The aims of these checking characters are:

- to avoid bothering transactions made by randomly dialling a CARTID
- to highlight errors by the player in dialling the CARTID.

ONE SECRET CARD CODE (SECCOD)

[0052] It is a numeric code composed of nine digits, completely covered by a hiding film, aimed at verifying the authenticity of the TOTOCARD; the hiding film can be and must be removed only by the Agency responsible for the payment of the winning. Previous removal of the hiding film by the player will invalidate the card. The invalidation will inhibit the player to collect the prize in case of winning.

SIGNATURE

[0053] It has been foreseen an empty space that can be filled in with the signature of the holder, to personalise the card.

PART 2 - INTERNAL SIDE (Fig. 2) CONTAINS:

THE SECRET PIN (CARTPIN)

[0054] THE SECRET PIN (CARTPIN) is a film hidden numeric code composed by five numbers. The player has to unhide this code by removing the film and is suggested to store aftewards PART 2 in a different place from storage place of PART 1, containing Identifying Card Number (CARTID), for additional security measure, as only the combination of both numbers would allow the betting transaction to be performed.

ONE SECRET CARD CODE (SECCOD)

[0055] This hidden secret code is exactly the same of the one reported in the PART
[0056] 1 - INTERNAL SIDE. It has the same function of the previous one, to allow the Agency responsible of the payment to check, before paying the prize, the correct correspondence between the CARTID and CARTPIN.

TECHNICAL CHARACTERISTICS OF THE CARDS

[0057]

Size (closed card): cm 8,89 x 5,09 (3,5" x 2")
multicolour print front/back
paperboard of 280/300 g/mq
fanfold packaging: 10000 cards

[0058] The use of TOTOCARD entails the following activities:

- production
- delivering
- retail sale

[0059] The management of production and distribution of the cards will be performed from the Service Centre (Fig. 6).
[0060] The serial numbers of the cards sold to Broker Agencies are reported to the Service Centre, so that it will be always informed and updated on the situation of the cards being circulated.
[0061] If it happens that the cards are stolen before being sold to players the Broker Agency must report the production serial numbers of the stolen cards to the Service Centre. The Service Centre will cancel these cards from the list of the enabled ones, inserting them in a black list.

[0062] To facilitate the comprehension of the following pages, we include here a glossary of the particular terminology used:

CARTID: identifying card number, as above mentioned.
CARTPIN: secret card PIN, as above mentioned.
BANCOD (SERIAL NUMBER OF A BANKNOTE): serial number of a banknote, that is situated on a legal banknote in circulation. It is used by the player to confirm the play (it is a random combination uniquely employed as "use and throw" code).

[0063] The player, to perform his play, will call the phone number related with the service.
[0064] Once the player and Service Centre are connected together on the phone, a "tree vocal menu" will lead the player during the transaction.
[0065] The "tree menu" is structured on two different main branches:

- access to the play session and related validation
- general information and reading of winning games

INFORMATION

[0066] The menu branch dedicated to the information is divided in three submenus:

1. Information on TotoTel service
2. Statistical information on the matches
3. Betting transactions checking

[0067] The first two submenus are accessible to everybody, as it is not necessary for utilising them to be holder of a TOTOCARD.
[0068] In the submenu 1, general information about procedures and structure of the gameand on costs of the service are supplied.
[0069] In the submenu 2 statistical information are supplied on the matches which are inserted in the current betting session.
[0070] The third submenu, accessible only to holders of a TOTOCARD, permits the player to check the performed play, until the betting transactions archives have not been yet frozen and officially delivered to CONI.
[0071] Furthermore, this submenu gives the player the capability of checking if a winning has been assigned to his TOTOCARD.
[0072] Further on we will describe all the checking formality, in a dedicated paragraph.

DESCRIPTION OF THE BETTING GAME TRANSACTION (Fig. 6)

[0073] Only a TOTOCARD holder can access the playing transaction s menu.
[0074] The player is interactively guided through all

the procedures needed to perform the betting game.

[0075] The transaction is structured in three phases: log in, betting, validation. The above listed phases are made available to the player only through the correct notification of the various codes requested by the Service Centre, following the interactive procedures of the game.

[0076] The service of telematic betting game transaction is structured on following steps:

- TOTOCARD identification to allow access to the game
- Choice of the game type: Totocalcio (Toto 13); TotoGol; Toto Sei.
- Choice of typology of betting (by single columns or system)
- Betting data selection
- Confirmation of the play through the notification of the SERIAL NUMBER OF A BANKNOTE.
- Communication of validation of the play by the Service Centre, through the vocal replay of the SERIAL NUMBER OF THE BANKNOTE previously notified by the player.

[0077] To facilitate the comprehension in the following we report synthetically an example of a betting game transaction:

- TOTOCARD identification to allow access to the playing session ➪the player, after achieving connection with the Service Centre, gets access to the game through the correct notification of the identifying card number (CARTID) and of the secret card PIN (CARTPIN).
- Choosing between the available game types

  ➪the system asks the player to choose the type of game he wants to play.

- Playing

  ➪According the chosen game type, the system will ask the player to select amongst the playing modalities offered by the rules of the game and to submit the data of his betting game.

- Validation of betting transaction

  ➪After completion of betting data submission by the player, the Service Centre will read to the player the submitted data. The Service Centre then asks the player to submit, as further security measure and to confirm his betting choices, the SERIAL NUMBER OF A LEGAL BANKNOTE, to be used as betting game transaction PIN.
  ➪The banknote used as game PIN, MUST be kept by the player as a receipt of the performed play toallow claiming of the prize in case of winning.
  ➪The Service Centre will read to the player, as validation of the playing transaction, the SERIAL NUMBER OF THE BANKNOTE (BANCOD) that the player has notified. At the same time automatically the Service Centre archives the betting game and corrispondingly decreases the amount of playing credit available with that TOTOCARD.
  ➪A TOTOCARD can be used as many times as his owner likes until the credit is finished, as far as he utilises a different banknote for each betting transaction

BETTING PAYMENT SYSTEM

[0078] The Service in consideration uses, as payment system for the betting games, pre-paid cards (called TOTOCARD) that allow the player to play up to "n" columns.

[0079] At the end of each betting game transaction the residual credit still available in the card will be updated and notified on-line to the player.

[0080] Such payment system is very user friendly and offers the possibility of guaranteeing always the credit necessary to pay the game.

[0081] To achieve this, if the number of columns played in the game is higher than the number of columns allowed by residual credit of the currently used TOTOCARD, the system offers the player the possibility to use another TOTOCARD, cumulating the amount of available credit in both cards. Even more than two TOTOCARDs can be used, applying recursively such modality, to pay the amount of columns that a player wants to play.

[0082] The game transaction will be archived associated to the last used TOTOCARD. Notwithstanding, the player MUST keep all the used TOTOCARDs, because in case of winning they will have to be presented all together to claim for the prize.

GAME TRANSACTION CONTENT VERIFICATION

[0083] After having terminated playing transaction, the player can verify the game content by calling the Information Service and accessing to the verification submenu.

[0084] The system asks the player to dial the CARTID, the CARTPIN and the BANCOD, then according to them the system retrieves the data on corresponding game content and reads them on-line.

[0085] Through this procedure, the player will be able to obtain the verification of contents of his betting transactions anytime until the closing of the current betting contest.

WINNING GAME VERIFICATION

[0086] Once the checking of the winning columns has been terminated, through informatic media produced by the related CONI Data Processing Centre, all the data about the winning games performed through the TotoTel service will be transferred to the TotoTel Service Centre, which will make them available for on-line verification by phone.

[0087] The player interested to know if his betting transaction is a winning one will call the Information Service and will dial the CARTID and the CARTPIN (identifying the TOTOCARD) and the system will give automatically information about all the winning games corresponding to that TOTOCARD whose prizes have not yet been claimed. In relation to every winning game the system will tell to the player:

- the typology of game (Totocalcio, TotoGol, TotoSei or whatever)
- the number of the betting contest
- date and hour in which the game transaction was performed
- amount of the prize

PRIZE PAYMENT SYSTEM (Fig.7)

[0088] The player, in case of winning, to claim the prize will have to show to the paying Agency the following:

- Part 1 of the TOTOCARD associated with the winning game, containing the CARTID
- Part 2 of same TOTOCARD, containing the CARTPIN
- Part 1 and Part 2 of all TOTOCARDs used to pay the winning game
- the banknote whose number has been used as BANCOD

[0089] The paying Agency responsible will unhide the two SECRET CODES OF THE CARD (SECCOD) and will verify the authenticity of the card, by retrieving from the Service Centre all the data (CARTID, CARTPIN, SECCOD and BANCOD) identifying the TOTOCARD and the winning game.

[0090] Furthermore, he will verify with same procedure also the authenticity of all other TOTOCARDs used to pay the winning game, if it is the case. Once the procedure of verification has been completed, the Agency responsible will pay the prize.

[0091] The Service Centre will contestually invalidate of the TOTOCARD, consequently the paying Agency will also pay back the residual amount of credit still available in the winning TOTOCARD. Part 1 and Part 2 of the TOTOCARD will be collected and stored with all the other involved TOTOCARDs and the receipt banknote (that will be, of course, paid back).

GENERAL ARCHITECTURE OF THE SYSTEM (Fig.8)

[0092] The user, by any kind of phone (or by computer connected to INTERNET) calls and connects to PLURITEL service of TELECOM, which will route the connection to the Service Centre (Fds=Service Supplier).

[0093] The Front End Processors of the Service Centre manage the call and the betting game transaction.

[0094] Once the betting game is definitively validated, related data are sent to:

- the Data Base Server which archives them on a Hard Disk and Optical Disk, and eventually prints them.
- The Command and Control Management System, which also archives them on fault tolerant Hard Disk and on Optical Disk.

[0095] There is also a telematic link with the Bank in charge of prize payments, to allow data exchange needed to authorize payments.

SERVICE CENTRE DESCRIPTION (Fig.9)

Components and related functions

[0096] Service Centre structure is a totally distributed one. All components are connected through LAN and WAN and therefore they can be located and/or duplicated in different sites, even very far ones. Such architecture supports:

- very high reliability. All components are at least duplicated (most of them are many times redundant) and LAN/WAN works as a geographically extended switching matrix, capable at any time of connecting fundamental components to assure full functionality to the system
- great operational flexibility. Command and control of the whole system can be located anywhere in the system locations and duplicated several times
- a very fast adaptivity to load conditions. Duplication of functions on several identical components allows optimal distribution of work loads and therefore high capability to support new higher ones

APPLICATION AND FRONT END PROCESSORS

[0097] Front End Processors are Service Centre components dedicated to manage telephone connections, which are routed towards them through Pluritel and Itapac networks.

[0098] Main functions of Front End Processors are therefore:

- Handling of connections with X25 Itapac network. Front End Processors are connected to Itapac network through point-to-point lines, each operating at

64 Kbit/s with configuration, Itapac side, in Hunt-Group modality. Every Front End Processor performs:

- ➪X25 protocol interpreting and executing
- ➪fetching X25 connect controls of Itapac network
- ➪handling all virtual connections (SVC) with ACSF
- ➪managing Pluritel protocols on SVC
- ➪demultiplexing users connected to same SVC
- ➪routing of received data towards respective users management tasks
- ➪queing on same SVC of data coming from users management tasks
- ➪updating of statistical counters associated to all active SVCs and making them available to SNMP queries
- ➪sending SNMP trap interrupts when unexpected or abnormal events happen

- Handling of betting transactions. The more relevant functions are:
  - ➪checking playerÕs TOTOCARD validity, by access to Data Base Server
  - ➪guiding the player by vocal menus through betting submission
  - ➪asking player to submit BANCOD
  - ➪archiving of betting game data in Data Base Server
  - ➪storage of same betting game data, together with sequential archiving number assigned by Data Base Server, on at least 2 local sequential files. An off-line autonomous task, running on management computers, continuously or cyclically, is transferring betting games data from sequential files to corresponding CD-ROMs. Such redundant storage procedure increases data security and loosens need to have Data Base Server producing optical disks to be sent to CONI

- Information management and ancillary services to users. Users can get also:
  - ➪TotoTel general informations
  - ➪statistical information on currently open betting contest
  - ➪verification of previously performed betting transactions, by TOTOCARD, with dedicated query to Data Base Server
  - ➪read out of winning games, by TOTOCARD, with dedicated query to Data Base Server

COMMAND AND CONTROL MANAGEMENT SYSTEM

[0099] This System, normally duplicated but even with higher redundancy, is structured as a cluster of two multiprocessor nodes.

[0100] The functions performed by such systems, singularly or in parallel, are:

- Management of a Totaliser. The System is updating a Totaliser with data on each accepted betting game
- Statistics Management. Counters and Historical Series are continuously updated to allow overall evaluation of service performance and quality, e.g.:
  - ➪calls distribution by hours of the day
  - ➪betting games distribution by hours of the day
  - ➪number of aborted calls
  - ➪number of active SCVs
  - ➪number of active connections to Data Base Server

- Management and updating of Soccer Teams Archive. Data on all soccer teams which are involved in betting contests must be known to the system, as on them following Data Base is kept;
- Management and updating of Betting Contests Data Base. This Data Base contains all betting contests included in the current season calendar. On each contest following info is stored:
  - ➪contest reference data
  - ➪names of involved teams
  - ➪related vocal messages

- Management and maintenance of Vocal Messages Archive. This Archive contains a copy of vocal messages stored in all ACSF and must be updated, for instance, if a new team is involved in betting contests.

GATEWAY

[0101] These equipments allow distributed location of System components to be effectively implemented. They utilise transparently any among X25, Frame Relais, or ISDN lines in order to optimise connection quality when line conditions are degraded

DATA BASE SERVER

[0102] It implements the redundant and fault tolerant memory of Service Centre, normally mirrored in more than one location. Such Server must at least handle and manage following Data Bases (or relational DB tables):

- TOTOCARD Data Base

- Betting games transactions Data Base (one for each contest)
- Winning games Data Base

GLOSSARY

[0103]

- BANCOD (SERIAL NUMBER OF A BANKNOTE): serial number of a banknote, that is situated on a legal banknote in circulation. It is used by the player to confirm the play (it is a random combination uniquely employed as"use and throw" code).
- CARTID: identifying card number.
- CARTPIN: secret card PIN, used by player together with CARTID, to activate betting transaction
- PLURITEL: TELECOM telephone network supporting interactive vocal services
- SECCOD: secret code to be used to verify card authenticity by paying Agency
- SIM: cellular telephone user identification card
- SMS: cellular telephone technology allowing data transmission contemporarily with in progress conversation

Claims

1. Method and systems to implement playing, in telematic and automatic modality, for betting, gambling, lotto, lotteries and any other games of chance, as for example Totocalcio, Totogol,Totip, constituted by a Service Centre that implements the functions of Virtual Broker and/or of Virtual Area Agency, by a public phone transport network and, if it is the case, by an Internet network, to access the service, and by pre-paid cards or credit cards or any other system of credit, for the payment of the playing transactions, and **characterized** by the fact that the player can play telematically, by connecting with the Service through any kind of phone, using a service of the type of PLURITEL of TELECOM ITALIA, or through a PC, using INTERNET network, thanks to the use of secret security and checking codes, CARTID and CARTPIN, supplied on the pre-paid and not pre-paid cards, which are necessary to the user to play, and by the fact the user provides, by the chosen telematic modality, the serial number, BANCOD, of a legally valid banknote, as identifying code for the play transaction he wants to submit.

2. Method and systems to implement playing, according to claim 1, **characterized** by the fact that the user/player must keep the banknote, of which he has sent the serial number, BANCOD, as paper certification of the performed game transaction and that consequently he has to give it, in case of winning, for the collection of the prize.

3. Method and systems to implement playing, according to claims 1 and 2, characterized by the fact that in case of using pre-paid cards said cards are be provided of a further hidden checking code and therefore secret code, SECCOD, which exclusively the Agency responsible for paying the prizes for winning games is authorized to unhide, only when the pre-paid card and the identifying banknote related to the winning game transaction are presented to claim for the prize, and that the available credit on each pre-paid card can be always completely used for playing and the available credits of many cards can be used jointly for a single game transaction, with no technical limitation to their number and therefore to maximum game payment amount.

4. Method and systems to implement playing, according to claims 1, 2 and 3, **characterized** by the fact that the Service Centre is active 24 hours a day, that the Service Centre acts as a Virtual Broker Agency and/or Virtual Area Agency, and it is structured in the following subsystems: Pre-paid Cards Production and Management, Call Centre, PLURITEL and SMS Servers and Host. Main functions of the above mentioned subsystems are: Pre-paid Cards Production and Management; archiving management for CARTID, CARTPIN and SECCOD, automatic on-line information on the game providing to players; automatic management of the game transactions with security checking of cards and access codes; management of automatic and/or operator supported information to either the Broker Agencies or the players; automatic computerized storage on unerasable informatic media of game transaction data and related game unique identifying code BANCOD and card unique identifying codes CARTID and CARTPIN; contest closing management with production of game transactions archiving files and delivery of the documental materials and legal supports.

5. Method and systems to implement playing, according to claim 1, **characterized** by the fact that the user to communicate with the Service Centre can use a DTMF phone keyboard or a pulse phone or Voice Recognition functions of the Service Centre.

6. Method and systems to implement playing, according to claim 1, characterized by the fact that user/player, at anytime after having performed the playing transaction, can ask for a verification of the contents of the game, submitting by phone the necessary codes, CARTID CARTPIN and BANCOD, and receiving back an automatic vocal message with the contents of the game transaction.

7. Method and systems to implement playing, accord-

ing to claim 6, **characterized** by the fact that the user can also communicate, by phone, to the Service Centre a fax number to receive a written report on the game transaction contents.

8. Method and systems to implement playing, according to claim 1, **characterized** by the fact that the user/player, at anytime after having performed the playing transaction, can ask for a verification of the contents of thegame, sending through Internet the necessary codes CARTID, CARTPIN and BANCOD together with an e-mail address, to receive a written report on the game transaction contents.

9. Method and systems to implement playing, according to previous claims, **characterized** by the fact that the Cards are made with a paper and/or plastic support on which identifying codes and a hidden secret code for the collection of the prize, in case of winning, are printed; the above mentioned codes are archived in a security compliant system and can be read only by a dedicated computer routine, aimed at assuring security protection on access to the secret codes.

10. Method and systems to implement playing, according to previous claims, **characterized** by the fact that the Service Centre stores in a dedicated file both the identifying codes of the produced cards and the related secret codes and that it archives also the identifying codes of the cards delivered for distribution.

11. Method and systems to implement playing, according to previous claims, **characterized** by the fact that the Service Centre gives, through a controlled access, information about the service modalities and about statistics useful for the player and for the broker agencies and that it stores in unerasable way the performed games transactions data.

12. Method and systems to implement playing, according to previous claims, **characterized** by the fact that a set of Òuse and throwÓ codes supplied to the player is used to avoid the risk of utilisation of the available credit from third parties, even if not probable being justified only by purpose of ÒvandalismÓ.

13. Method and systems according to previous claims, **characterized** by the fact that they can be used with similar modalities for any other kind of telematic transaction and/or service that present similar requirements of certifying a performed transaction.

Fig. 1

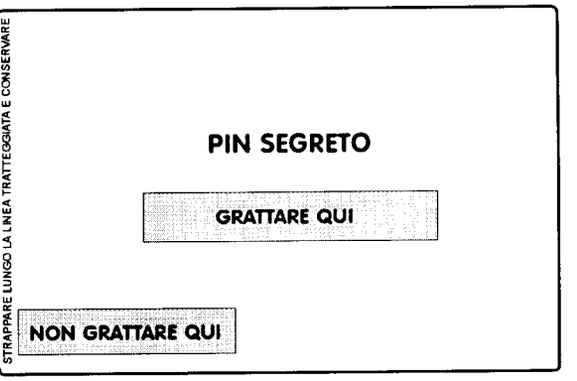


Fig. 2

Fig. 3

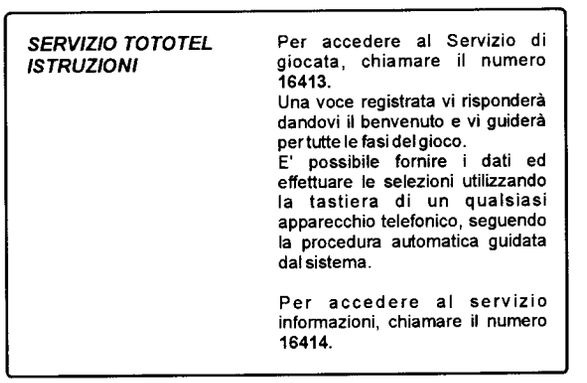


Fig. 4

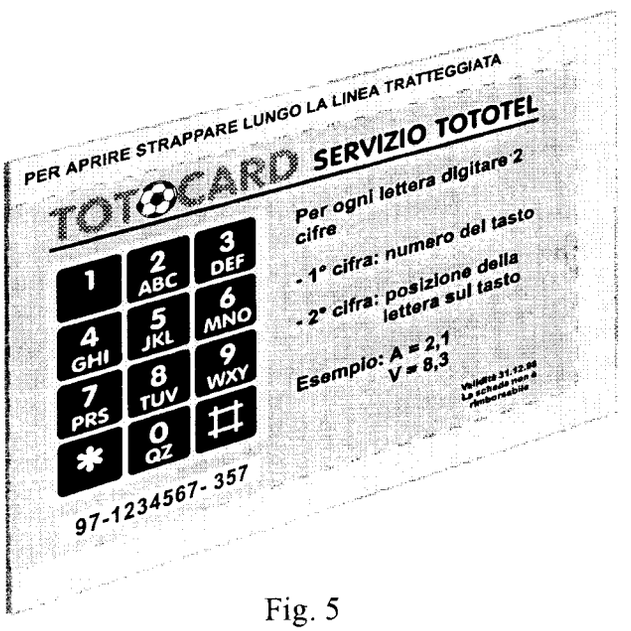


Fig. 5

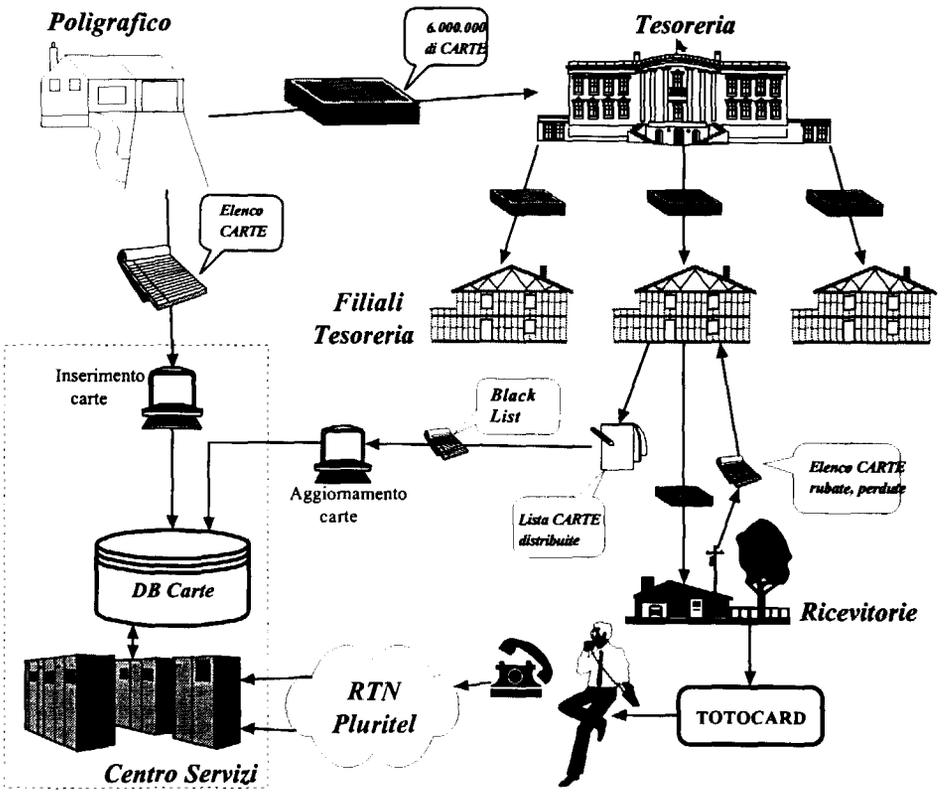
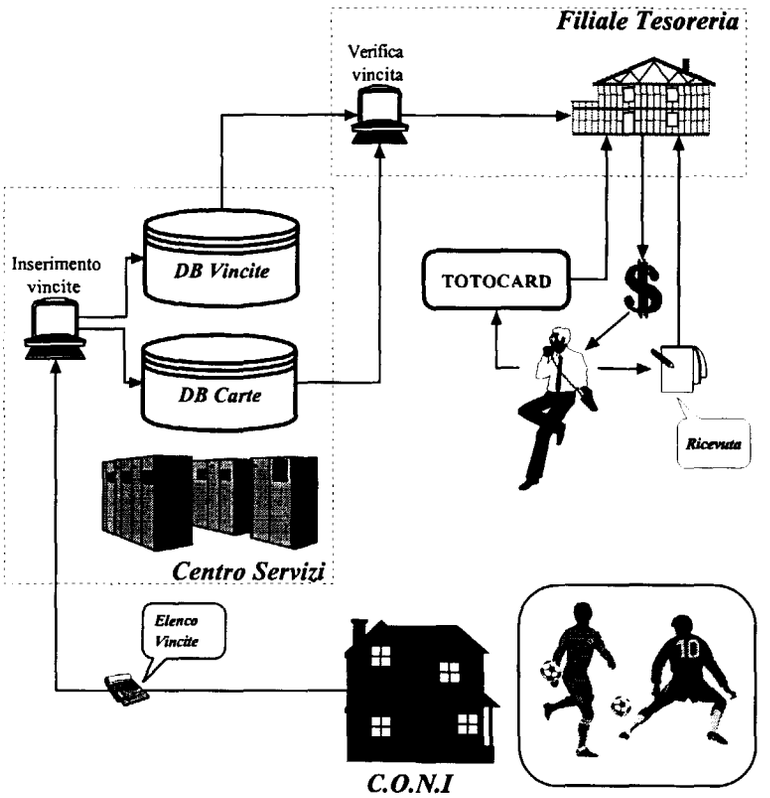

Poligrafico
6.000.000 di CARTE
Tesoreria
Elenco CARTE
Filiali Tesoreria
Inserimento carte
Black List
Aggiornamento carte
Elenco CARTE rubate, perdute
Lista CARTE distribuite
DB Carte
Ricevitorie
RTN Pluritel
TOTOCARD
Centro Servizi

Fig. 6


Filiale Tesoreria
Verifica vincita
Inserimento vincite
DB Vincite
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TOTOCARD
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Ricevuta
Centro Servizi
Elenco Vincite
C.O.N.I
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Fig. 7

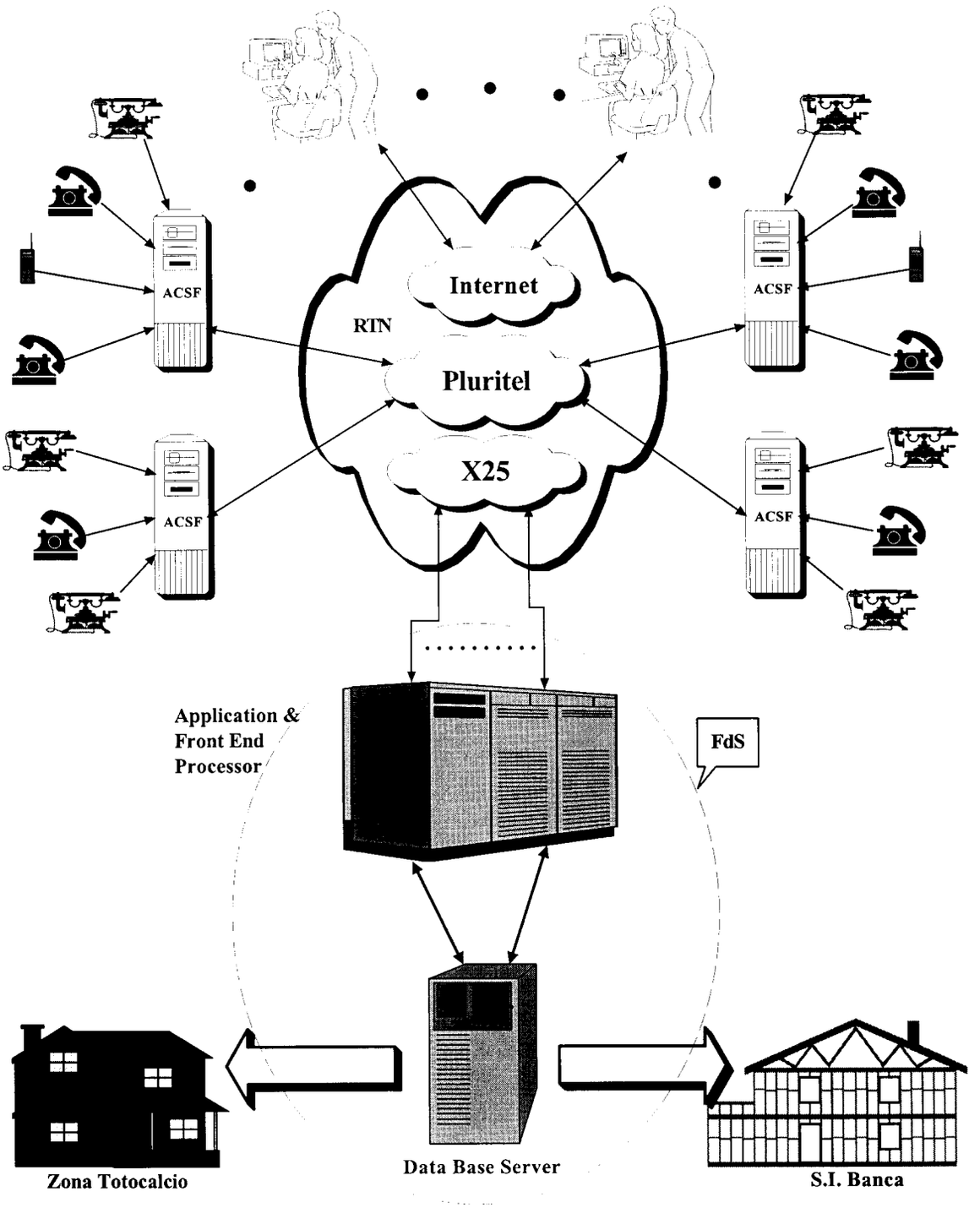
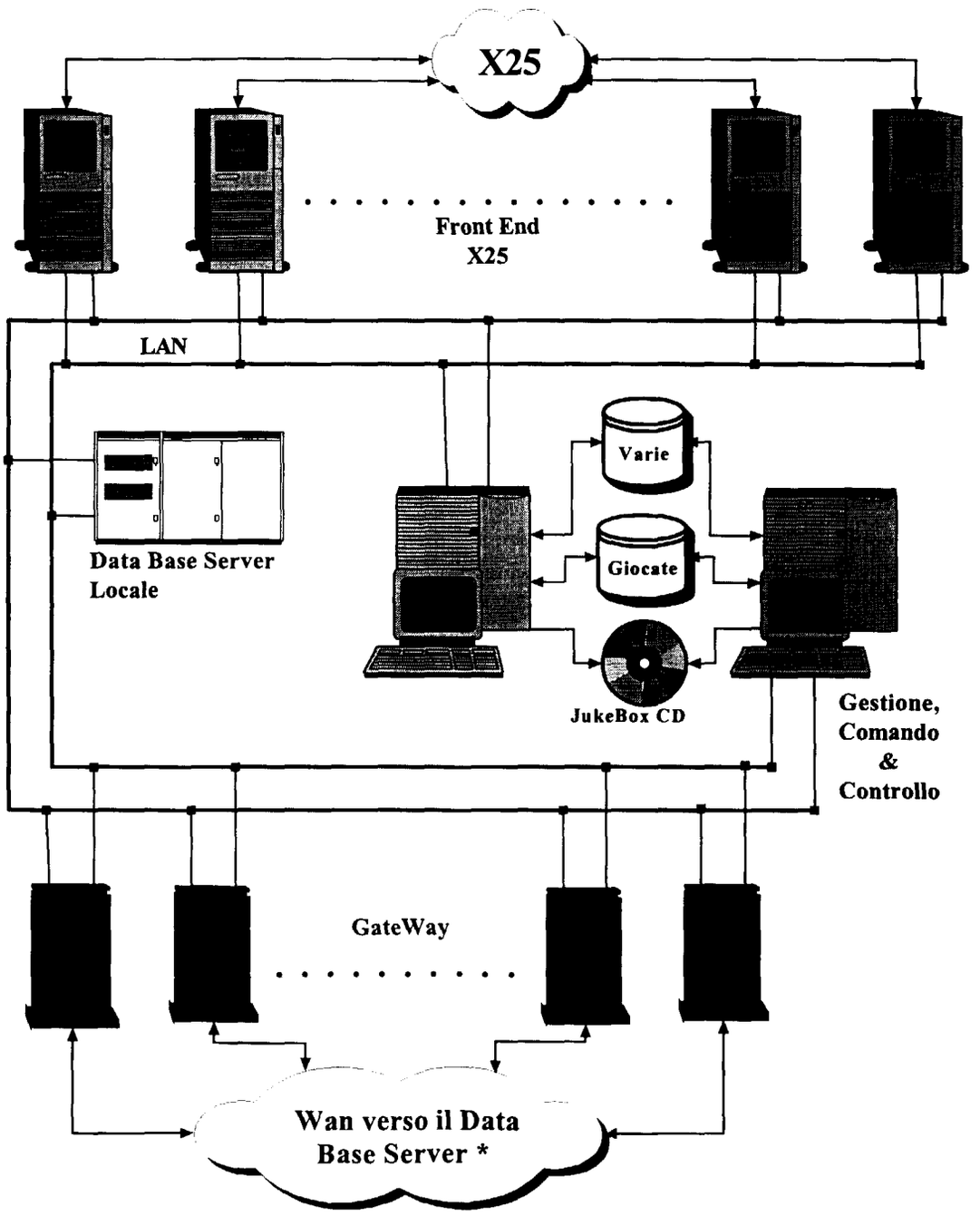

ACSF
ACSF
ACSF
ACSF
RTN
Internet
Pluritel
X25
Application &
Front End
Processor
FdS
Zona Totocalcio
Data Base Server
S.I. Banca

Fig. 8



** Nel caso di DB Server integrato sul centro del S.I. Banca*

Fig. 9

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 83 0128

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,Y A	US 5 327 485 A (LEADEN) 5 July 1994 * column 3, line 37 - column 4, line 61; figures *	1,5,9-13 2-4,6-8	G07F17/32
Y A	US 5 497 990 A (NANNI) 12 March 1996 * column 3, line 13 - line 47; figure *	1,5,9-13 6-8	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

G07F
G06F
G07C
A63F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	6 August 1998	Neville, D

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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