Title: CONJUGATED POLL AND AUDIENCE INDEX MEASUREMENT SYSTEM

Abstract: The system described comprises Survey Remote Units (SRU) installed in the households of the users which are part of the surveyed audience, and at least one Communication Control Center (CCC) responsible for the collection of the survey's audience and answer data for all the SRU's, being said CCC also responsible for sending questions to the users; the system allows polling through questions formulated to the users and instantaneously answered by them in REAL-TIME, interactively, or Off-line, and an audience poll, encompassing TV or radio, allowing the identification and counting of the people which are answering the questions or watching a show and/or commercial ad broadcast by a radio/TV station; the sending of data from each one of the SRU's to the CCC and vice-verso is made through cellular telephony.
"CONJUGATED POLL AND AUDIENCE INDEX MEASUREMENT SYSTEM"

The poll and measurement system presented allows real time checking of radio and TV audience level, with com high speed, safety and easy installation; furthermore it affords interactivity with the surveyed public, offering a new method to assess the opinion of the radio/TV audience.

State of the Art

The general market has long been searching for means to evaluate the public opinion regarding products, ideas or trends, both old and new. The most usual way to do it is to send a large number of surveyors to the field and have them questioning people randomly, using a standardized questionnaire. Said methods causes several problems, such as high cost, delay in collecting the survey data, delay in delivering the survey results and most importantly lack of quality in the sample, because the questions were asked randomly with no statistic criteria to back them up.

Another method, also widely used, is the survey performed through a telephone line, either through questions and answers or through the dialing of a number which represents an answer to a question made on a the TV or radio. This method offers less time for the arrival of the data, but the sample is still of poor quality.

Systems using electronic apparatuses connected to the TV or radio set of people that form the audience and are previously selected are also known in the current state of the art, but said systems suffer from delays in the returning of the survey data to the assessment center, and do not allow instant interactivity with the user audience. Frequently the electronic apparatuses used feature complicate connections to the radio/TV sets, allowing such failures as the user adulteration of the survey data by turning off or modifying the connections of the electronic apparatuses, in a clandestine fashion; a typical example of such modification of connections is that while said apparatuses indicate to the assessment center that a given TV channel is being watched by the user, in fact this very user is watching another channel in his/her TV set, causing an error audience poll. With the advent of interactive digital TV it is now possible also to measure people’s opinion, thus affording a fair
speed on the data arrival; but still the poor quality of the sample data persists.

**Objects of the invention**

The purpose of the present invention is to provide a poll and audience measurement system which allows an instant verification of radio/TV shows audience, with both safety and easy installation, including also interactivity with the user audience. Said object is accomplished by means of a system using an electronic apparatus of easy installation along with the TV set/radio of said user audience, with a reduced possibility of fraud of the survey data by any of the users by any means, being said system also capable of formulating questions and collecting their corresponding answers in real time.

**Brief Description of the Drawings**

The present invention will be briefly described below with reference to an execution example which is duly represented in the drawings. The figures show:

Figure 1 - a block diagram depicting an overview of the poll and measurement system of the invention;

Figure 2 - a perspective view of an electronic apparatus, designated Remote Survey Unit (SRU), used in the system at hand, being said apparatus installed along with the TV set/radio of a given user belonging to the surveyed audience;

Figure 3 - a perspective view of the inside of the electronic apparatus or Remote Survey Unit (SRU), showing a simplified version of the internal electronics;

Figure 4 - a block diagram of said electronic apparatus, or Remote Survey Unit (SRU), showing the interaction with the user’s radio/TV receptor and a remote control unit belonging to said Remote Survey Unit (SRU);

Figure 5 - a view showing the interaction of said remote control unit belonging to the Remote Survey Unit (SRU) with the later, and the interaction of said Remote Survey Unit (SRU) with the user’s radio/TV receptor;

Figure 6 - a top view of said remote control unit, illustrating it’s functional keyboard;

Figure 7 - a block diagram of a Communication Control Center (CCC) belonging to the poll and measurement system of the present invention, in a general vision of it.
Detailed Description of the Figures and of the Invention

The conjugated poll and audience index measurement system allows instantaneous interactivity with the user audience because it operates in real time, with electronic apparatuses, designated Survey Remote Units (SRU), installed along with the radio/TV sets, in the households of those users which represent the universe to be surveyed; a statistically calculated sample profile incorporated in the system allows the qualification of all the answers.

According to Figure 1, which is a general block diagram, the system is composed by Survey Remote Units (SRU) installed in the previously selected households, and one or more Communication Control Centers (CCC). Let us observe that the SRUs are installed in the user's households according to a kind of "social pyramid", in this case representing those users which belong, in an exemplary fashion and not a limitative one, to three or more classes or social groups A, B and C; the data communication between the SRUs and the CCC is effected using the communication media which is more suitable to that city where said SRU is to be installed, including common telephone lines, cell phone link and trunking radio communication; said data sending from each SRU to the CCC and vice-versa, however, is preferably made through cell telephone connection, operating with signals belonging to the SMS (Short Message Service) digital system or through the digital packet network. The data communication between the CCC and a client which has hired the services of the system of the present invention is made through means already known in the state of the art, via modem/internet. The same happens for the communication between the CCC and an internet web page, and WAP (Wireless Application Protocol).

Presently with the advent of digital Cellular telephony in some places, the sending of digital information packets has been rendered very easy, either through data packets of the TCP-IP (Transmission Control Protocol-Internet Protocol) or UDP (User Datagram Protocol), or SMS. In the case of use of analogical cellular telephony, the data transmission through tons DTMF (Dual Tone Multiple Frequency) low-speed tones is
recommended, in order to minimize communication errors and ensure fast, good quality transmission/reception.

The choice of the households where each of the SRU is to be installed is made by a field research associated to statistical studies made with data supplied by a reliable source such as government agencies, research institutions and similar ones, taking into account several parameters such as: social class, number and age of the people living in that particular household, educational level, number of radio/TV receptors, geographic location, family income distribution, occupation, etc., therefore offering a known, good quality sample which allows the yielding of results which reveal the true opinion of the market, and that at a low cost, because it requires only a small number of people, and yet is statistically suitable.

Once an SRU equipment is installed in said households, the equipment is ready to perform an audience measurement on the TV or radio set of that particular household. Knowledge of the audience information of a given channel allows the performance of a poll directed only to those TV audience or radio listeners to a particular show or advertisement being broadcast at that very moment, or that only happen to have their TV or radio on.

The SRU has a non-volatile memory unit, which stores the questions and answers along with the audience data, in the case in which for some reason the immediate communication with the CCC is not possible, as for example happens upon power supply disruption, busy telephone lines, etc. In this case it is said that the SRU, which was in the on-line real time mode, has started to operate in the off-line mode.

Figure 2 illustrates the Remote Survey Unit (SRU) which is installed in each household, composed by a console (1) with an alphanumeric liquid crystal display (4), preferably with 2 lines and 40 columns and backlighting or plasma of easy visualization from a distance, where the questions, answers and messages are written for the user to see them. There may optionally be a keyboard (2) for operating the console and answering the questions presented to the user, and another display (3) indicating the channel being monitored. Internally said console houses all the communication electronics, an interface
with the TV or radio, represented by means of circuit boards (20), and an interface with the external communication device such as a modem interface (6) (not illustrated), alternatively including a complete cell phone (5), or only part of it, inside said console (1), which is illustrated in an open state, according to Figure 3.

The block diagram of Figure 4 presents a composition of the SRU’s electronic system, showing the interaction with the user’s radio/TV receptor and a remote control unit belonging to said Remote Survey Unit (SRU). A Central Control Unit CPU (12) has control of all the SRU blocks. When an information arrives through the cell phone (5) it relays said information to the CPU (12) via a modem interface (6) which is responsible for the electric conditioning of the signal. Said question is then decoded by the CPU (12) and sent to the Display unit (4). Along with said action the CPU (12) activates a sound signal (11) and a light signal (10) to summon the attention of the user. The user will answer the question using the keyboard (2), and said answer is read by the CPU (12) and immediately sent to the interface (6) and to the cell phone (5). In case it is not possible to relay the answer in real time, it is stored in said non-volatile memory (9) for being relayed as soon as possible, for the reasons already debated (lack of electrical power supply, busy telephone lines, etc.). the power source (13) conditions the electric power network and feeds all of the SRU circuits.

The answer to the question may also be effected by means of an external remote control unit (M) which will send the answer via infra-red to an infra-red sender/receiver (7) which in turn will send the answer to the CPU (12). Therefore, as seen on Figure 1, it is possible (if desired) to send questions only to those users of group B, for example; or else, hypothetically, to specific users of groups A and C which fit in a given age range; any combination of possibilities for the sending of questions to the users is possible, following any desired criteria.

The information of which TV channel is being watched, or which radio station is being listened to, as well as other data such as for how long said channel/station was watched/listened, quantity of people in the audience, etc., is processed by the CPU (12) and relayed, through the interface (6),
to the cell phone (5), which in turn sends said information to the CCC.

In order to facilitate the installation of the SRU in the household, provide prompt use and eliminate any unnecessary physical contact with the user's domestic apparatus (TV, satellite reception apparatus, VCR, DVD or radio receptor), as illustrated by Figure 5, and avoid the need for the user to insert in the SRU the channel/station number to be tuned in, the SRU simulates the functions of a remote control unit (0), originally belonging to the user's domestic apparatus itself, which is thus no longer used by said user; only the remote control unit (M) of the SRU is used to control the user's domestic apparatus and the SRU simultaneously, therefore ensuring that the SRU recognizes with no mistake the channel or station the user is tuning in the domestic apparatus. The SRU features a power socket at the back of the console (1) to which the power supply cable of the user's domestic apparatus must be connected; therefore, the electric power which supplies said apparatus passes through the SRU, which in turn is capable of detecting, electronically, those situations in which the apparatus is on/off. That minimizes the risk of the user falsifying the survey data by disconnecting said domestic apparatus (keeping the SRU on), or other modifications clandestine modifications of the signal connections of the electronic apparatuses, such as those that exist in the equipments of the current state of the art; in fact, in the present invention the only physical connections that exist are those of the SRU's power supply cable to the socket of the electric power network of the user's household, and a connection of the power supply cable of the domestic apparatus to the power socket located at the back of the console (1), and nothing else.

Upon installation of the SRU in the user's household, it is set in the "Learning" mode by an identified representative of the company which is using the poll and audience measurement system of the present invention. In this condition the SRU unit "learns" to emulate the original remote control unit (0) of the user's domestic apparatus, sufficing only to press the control (0) for the SRU and pressing the keys; and the infra-red signal sent by the control (0) is received by the infra-red sender/receiver (7) and the information is sent to the CPU (12),
which stores it in internal memory blocks; thus the functions of the control (0) keys are duly stored and "learned" by the SRU.

After finishing "teaching" the control (0) commands which are recognized by the user's domestic apparatus, the SRU will be ready to reproduce this exact commands, sending them via infra-red to said domestic apparatus, just like if it was the very remote control unit (0) original command. The use therefore happens in the following manner:

a) When a person wishes to change the TV channel, radio station, or change any function value of the domestic apparatus, said person will do so using the SRU remote control unit (M) instead of using the remote control unit (O) of said domestic apparatus;

b) Upon pressing a key in the SRU remote control unit (M), the later sends a code via infra-red which is received by the SRU, which in turn recognizes which command was requested and "translates" it to the code of the same command of the remote control unit (O) which is normally recognized by the domestic apparatus;

c) The SRU's CPU (12) is programmed, according to an internal algorithm, so that some time after having received the command from the SRU remote control unit (M), the CPU relays to the TV or other user apparatus the very same command translated, corresponding to the command of the remote control unit (O); and from time to time, each minute, for example, the SRU will once again relay to the user's domestic apparatus said translated command, thus ensuring that the apparatus remains tuned in that TV channel/radio station. That is necessary to keep the user from, eventually, adulterate the survey, using the control (M) to tune the TV, for example, in a first channel, via SRU, and later use the remote control unit (O) of the TV itself to tune it in a second channel different from the first one.

Therefore, the SRU is aware at any given moment of which channel the person is actually watching, for to change the TV channel/radio station, it is necessary to previously pass the channel changing command through the SRU. As already indicated further above, the SRU periodically sends the TV channel/radio station to the user's domestic apparatus in order to ensure that
if there has been a change of TV channel made by other media, this will return to the same channel/station originally tuned via SRU.

Another important feature of the SRU is the absence of an absolute internal clock, such as those existing in the electronic apparatuses of other, similar inventions. That is because if said internal clock happens to be wrong, that would be disastrous for the information which is stored and sent, because it would be absolutely untrustworthy, for after all the survey data could inform that a given show or add broadcast on a TV channel or Radio station was being tuned in an absurd, erroneous moment. Furthermore, it is an extremely difficult and complicated operation to synchronize all of the system SRUs and check whether the clock is correct in all of them; and therefore it is not required anymore that the user itself - which is part of the surveyed audience - manually checks and eventually corrects the clock time, because should this user do it the wrong way it would also violate the audience assessment.

In order to do away with this problem, the SRU features an internal counter, with second increments, which is periodically zeroed by the CCC. Thus the SRU, instead of sending an absolute time, sends only the time difference between the current change and the previous one, and it is the CCC duty to log said differences and synchronize the absolute time which, now deservedly, a single standard for the whole system and which is logged in the CCC.

The remote control unit (M) is an important SRU accessory and allows the user to comfortably command the TV, answer the questions and more importantly, identify himself for the system. Figure 6 illustrates the remote control unit (M) keyboard, of easy acquaintance and use by every person in the household, for with that in mind was elaborated a symbolic (icon) representation which easily identifies each key’s function.

This keyboard features a set of specific keys to answer questions, and were formulated to serve every quantitative and qualitative question propositions, such as the YES/NO kind, the OPTIMUM/GOOD/REGULAR/BAD/VERY BAD/INDIFFERENT kind and the grading kind from 0 to 9.

The user may identify himself either directly with the icons MAN/WOMAN/SON/DAUGHTER/NON-RELATIVE/EMPLOYEE or
else simply entering his log number for the company which is using
the poll and audience measurement system of the present invention,
whenever prompted by the SRU, and entering data indicative of
whether the person is ENTERING or LEAVING the room where the SRU
and the TV/radio apparatus are positioned, so that it is possible
to establish how many people are watching/listening, in the same
room, to a radio or TV show.

The commands for SEND/CANCEL may be used to finalize or cancel an answer, the channel keys and UP/Down arrow
keys are used to control the channel/station and volume of the
user’s domestic apparatus and the ON/OFF key commands both said
apparatus and the SRU simultaneously. The SOUND key allows the
user to turn off the sound signal, even before receiving a new
question, in order to keep privacy.

The Communication Control Center (CCC) is responsible for collecting the survey’s answering data and the
audience of all the SRUs, and said data can be collected via a
standard telephone network, a cellular telephone network (either
digital or analogical). The CCC is also responsible for the
sending of questions, configuration parameters and test telemetry
for each SRU.

The beginning of the communication process between each SRU and a CCC is made by the first side which has an
information to send, therefore reducing the answering time of the
whole ensemble, differently of what would happen using the
“pooling” model between the CCC and the SRUs.

The CCC periodically requests a confirmation to those SRUs which have not been initiating the communication
process for some time, prompting them for transmitting some new
data. That is done to evaluate whether there is some problem with
these SRUs or simply if the SRU has nothing new to report/send.

The data collected by the CCC are stored in a CPU which keeps a steady databank. Said data may be collected or sent
remotely to the Internet, intranet, cellular phone WAP (Wireless
Application Protocol) or via radio to terminals with data and SRU
inquiry and configuration protocols, thus rendering universal the
collected information.

The CCC, as seen on the block diagram of Figure 7, is made up by a rack (R) with a first CPU (14) responsible for
the data management and storage, a second CPU (15) which mirrors
the databank to ensure better reliability, "firewall" and router,
communicating with the Internet, intranet, etc. and an
Interface/modem (16) which adapts the signals of a cell phone or
television line (17) to the CPUs (14, 15). The data collected by
the CCC are processed in an internal algorithm which allows the
establishment of the audience levels for each show/commercial add,
for each broadcast time, everything duly classified, according to
the desired parameters, such as social class, age range, schooling
level, geographic location, family income distribution,
occupation, etc.

A more compact version (M') of the remote control
unit (M) integrates all the features and functions of the SRU,
operating in the same way, including the complete keyboard (2),
display units preferably with a visible area sized between 1.5 cm
and 6 cm in high and between 7 and 15 cm in width of the liquid
crystal or plasma (displays) (3, 4), communication by cellular
telephony (5), infra-red sender/receiver to command the TV/radio,
a power source with internal battery to make the apparatus fully
portable, and further electronic circuits existing in the SRU, but
then with the physical dimensions of the very control (M)
preferably between 10 cm and 20 cm in high and between 15 cm and
25 cm in width, thus completely eliminating, physically, the SRU's
console. Therefore the control (M') is the only piece of
electronic equipment handed over to the surveyed user, in his
household.

To make it short, the present invention features
a table (1) or portable (M') SRU equipment, with no physical
connection of audio/video signal with the user's domestic
apparatus, which allows polling through questions and answers in
REAL-TIME or Off-line; allowing the performance of audience polls,
covering TV and radio, allowing identification and counting of the
people which are answering or watching/listening to a show
("people meter"), simulating the original remote control unit (O)
of the user's domestic apparatus, and using cell phone,
conventional telephone line or radio for the instantaneous
information exchange between the SRU and the CCC. The present
invention uses a counting algorithm of differential time to
evaluate the time of channel change or the question answer, uses
icons on the keyboard (2) keys and on the remote control unit (M), facilitating the interaction with the user, and the set of answer keys allows qualification or quantification of any kind of question; the power supply command for the SRU and TV is a single unit, functioning either with network supplied electric power or battery. It uses the TCP-IP and UDP ("data-packets") technology for transmission of packets, preferably via cell phone.

Once a preferential incorporation example is described, it must be understood that the scope of the present invention encompasses other possible variations, being limited only by the content of the appended set of claims, therein including any possible equivalents.
What is claimed is:

1) "CONJUGATED POLL AND AUDIENCE INDEX MEASUREMENT SYSTEM", characterized by the fact that:
   it comprises Survey Remote Units (SRU), each one installed along a domestic apparatus in the household of a different user which is part of the surveyed audience, each (SRU) having a particular remote control unit (M);
   - it comprises at least one Communication Control Center (CCC) responsible for collecting answer data on the survey and the audience index of all the (SRU), being the (CCC) also responsible for the sending of the questions to the users, with multiple combinations of question sending options to any user, according to desired criteria; the (CCC) is also responsible for the configuration parameters and test telemetry for each (SRU);
   - it allows polling through questions formulated to the users and answered by them instantaneously in REAL-TIME, interactively, or Off-line;
   - it allows the performance of an audience poll, encompassing TV and radio, allowing the identification and counting (qualification) of the persons which are answering the questions or watching a show and/or commercial add hosted by a radio station/TV;
   - the data collected by the (CCC) are processed in an internal algorithm which allows the establishment of the audience levels for each show/commercial add, for each broadcast time, everything classified according to the desired parameters such as social class, age range, schooling level, geographic location, family income distribution, occupation, etc.

2) "SYSTEM", according to claim 1, characterized by the fact that the data sending of each (SRU) to the (CCC) and vice-versa is made through cellular telephony, operating with signals belonging to the SMS digital system, or UDP or TCP-IP packet digital network.

3) "SYSTEM", according to claim 1 or 2, characterized by the fact that the (CCC) is comprised by a first CPU (14) responsible for data management and storage, a second CPU (15), acting as a mirror of the databank for improved reliability, a "firewall" and an Interface/modem (16) which adapts the signals of a cell phone or a telephone line (17) to the CPUs (14, 15).
4) "SYSTEM", according to claim 1, 2 or 3, characterized by the fact that the data communication between the (SRU) and the (CCC) is performed using the communication media which is most suitable to the city where the (SRU) is installed, via common telephone line, or via cell phone, or via "trunking-type" communication radio.

5) "SYSTEM", according to claim 1, 2, 3 or 4, characterized by the fact that the data communication between the (CCC) and a client that has hired the services of the present invention's system, and the communication between the (CCC) and a Web page on the Internet, and WAP, is made through modem/internet.

6) "SYSTEM", according to claim 1, 2, 3, 4 or 5, characterized by the fact that the (SRU) features a non-volatile memory unit, which stores questions and answers, along with the audience data.

7) "SYSTEM", according to claim 1, 2, 3, 4, 5 or 6, characterized by the fact that the (SRU) is comprised by a CPU Central Control Unit (12) which controls all the SRU blocks; via a cell phone (5), either complete or only a part of it, which receives a signal information which it relays to the CPU (12) via a modem interface (6), responsible for the signal's electric conditioning; a Display unit (4) which displays questions and messages sent by the (CCC), and operational indication messages of the (SRU) itself; an optional channel Display unit (3); an infra-red sender/receiver (7) capable of communicating with the remote control unit (M) and with the user's domestic apparatus; a sound signal (11) and a light signal (10); a keyboard (2) which data are read by the CPU (12) and immediately sent to the interface (6) and the cell phone (5); a non-volatile memory (9) which stores the questions formulated to the user and their respective answers, along with the audience data; and a power source (13) which supplies power to all the (SRU) circuits.

8) "SYSTEM", according to claim 7, characterized by the fact that the information of which TV channel is being tuned, or which radio station is being listened to, as well as other data such as for how long a given channel/station was watched/listened, the quantity of TV watchers/listeners, etc., is processed by the CPU (12) and forwarded, through the interface (6), to the cell phone (5), which in turn sends said information.
to the (CCC).

9) "SYSTEM", according to claim 7 or 8, characterized by the fact that when a question is sent by the (CCC) to an user, said question enters via cell phone (5) and arrives via interface (6) at the CPU (12), being decoded and sent to the Display unit (4), at the same time in which the sound signal (11) and the light signal (10) are triggered to summon the user's attention.

10) "SYSTEM", according to claim 9, characterized by the fact that the user answers a question via the keyboard (2); in case the answer is not sent to the (CCC) in real time, it is stored in said non-volatile memory (9) for later sending as soon as possible.

11) "SYSTEM", according to claim 9, characterized by the fact that the answering of the question is effected through a remote control unit (M) which sends an answer via infra-red to the infra-red sender/receiver (7) which relays said answer to the CPU (12).

12) "SYSTEM", according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or 11, characterized by the fact that the only physical contact between the (SRU) and the domestic apparatus in the user's household occurs through a power socket belonging to the (SRU) to which is connected the power supply cable of said domestic apparatus.

13) "SYSTEM", according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12, characterized by the fact that the (SRU) features media to electronically detect if the electric power is being supplied to the domestic apparatus in the user's household, detecting the situations in which the domestic apparatus is on or off.

14) "SYSTEM", according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13, characterized by the fact that the (SRU) features a "learning" operational mode in which said (SRU) "learns" to reproduce the commands of an original remote control unit (O) belonging to the domestic apparatus in the user's household.

15) "SYSTEM", according to claim 14, characterized by the fact that the (SRU) "learns" and stores the commands of the original remote control unit (O) by means of the
infra-red signal sent by the control (O) itself, being received by the infra-red sender/receiver (7) with the information being sent to the CPU (12) which stores it in internal memory blocks.

16) "SYSTEM", according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 15, characterized by the fact that only one remote control unit (M, M') is used to control, either directly or indirectly, the domestic apparatus in the user's household.

17) "SYSTEM", according to claim 14, 15 or 16, characterized by the fact that the (SRU) receives an infra-red signal from the remote control unit (M), corresponding to a command, and the (SRU) issues another infra-red signal corresponding to this same command to the domestic apparatus in the user's household, reproducing the functioning of the remote control unit (O) as if it was the original control (O) itself, making redundant the use of the later.

18) "SYSTEM", according to claim 17, characterized by the fact that the CPU (12) of the (SRU) is programmed, according to an internal algorithm, so that some instants after the (SRU) has sent a command corresponding to the sintonization of a TV channel/radio station to the domestic apparatus in the user's household, the very same channel/station sintonization command is periodically sent again to said domestic apparatus to ensure that it remains tuned to that particular channel/station.

19) "SYSTEM", according to claim 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 or 18, characterized by the fact that the (SRU) features an internal counter, with second increments, periodically zeroed by the (CCC), and thereby the (SRU) sends to the (CCC) only the time difference between successive zeroing operations of said counter.

20) "SYSTEM", according to claim 19, characterized by the fact that the (CCC) takes charge of the logging of said time differences between successive zeroing operations of said counter, sent by the (SRU), and of synchronizing with an absolute clock which is unique for the whole system and is logged in the (CCC).

21) "SYSTEM", according to claim 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20,
characterized by the fact that the communication process between each (SRU) and the (CCC) is begun by the first side that has information to be sent, with no "pooling" between the (CCC) and the (SRU), thus reducing the answering time of the whole set.

22) "SYSTEM", according to claim 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or 21, characterized by the fact that the (CCC) periodically requests confirmation by the (SRU) that have not been initiating the communication process to relay some new data for some time, thereby assessing the situation of operation (test confirmation) of the (SRU).

23) "SYSTEM", according to claim 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 or 22, characterized by the fact that instead of the (SRU) the system uses a compact version (M') of the remote control unit (M) that integrates in it all the resources and functions of a (SRU), operating much in the same way, including a complete keyboard (2), display units (3, 4), cellular telephony communication (5), infra-red sender/receiver (7), a power source with internal battery, and further electronic circuits existing in said (SRU), making the later redundant.
ANTENNA

CELLULAR PHONE LINE 17

INTERFACE MODEM 16

FIRST CPU 14

SECOND CPU 15

INTERNET, INTRANET, ETC.

RACK R

Fig. 7