data or disallowed card type, the prompt "INVALID CARD/NUMBER" is displayed at **41** and the unit returns to start at **3''**. If valid, the data is placed via **43'** into the call detail record memory **45**. In the case of credit cards, this data includes card type, expiration date, customer ID, etc. The internal modem then dials the number and prompts "DIALING XXXXXX" at **47**. After a programmable wait period **49** determined by local service access delays (touch-tone, dial-pulse, or cellular) the unit then prompts "Pick-Up Handset" at **51**. The date and time of the call are then appended to the call detail record N+**1** at **53** and, after programmable wait period **55** to allow for connection, the unit releases the line from its internal modem to control by the user handset. While prompting "HANG-UP WHEN DONE" **57**, the unit tests the line at **59** for a call in progress until the user hangs up, the called party hangs up, or a no-service condition exists. It then appends the time of completion to call detail report N+1 at **61**, closes that report and returns to start.

Secondary calling routines **4** are provided to invoke a variety of functions such as emergency dialing (911-Police), operator assistance, information services, etc. Each routine can be customized for a particular area and/or system operator/owner (for example, the before-mentioned "911", with number storage in temporary dialing register **6** and call detail report N+1 at **8**). These routines involve the same process of primary calling routines with the exception of bypassing the credit/calling card validation and storage portions **41–45**.

Turning, now, to the PC host computer component of the invention, such HOST, FIG. **3**, is comprised of modems M, HOST software S, and, for example, an IBM-PC class micro-computer, so-labelled. The system can be expanded to include up to 32 modems, an 80386 based super-micro, and multiple serial I/O ports. No on-line processing is involved, and the ultimate capacity is limited only by the operating system. The HOST software can also be ported to UNIX/XENIX based systems for extremely large network populations. Alternatively, owners can gradually expand their PC-based operations by simply adding additional PC systems networked together via a LAN. The number of modems M and the capabilities of the micro-computer is determined solely by the number of telephone units in service. A network of 100 such intelligent telephone units, for example, would only necessitate one modem and a low-cost IBM-PC compatible.

The HOST software S is a communications program developed to facilitate application development. It manages modem status and configuration, receives incoming data, performs LRC error checking, sends NAKs and ACKs, before-described, and saves the transaction reports T into individual ASCII files. These files can then be accessed by numerous commercial database management packages for manipulation and processing as is well known. In addition to transaction files, the data base manager D would access other files containing individual FONE UNIT data F (telephone number and installation location), LATA charge rate structure L, and owner/operator billing algorithms A. The output of the HOST system, moreover, can be flexibly configured to produce printed invoices for direct customer billing, and magnetic tape, or batch up-loads via modem to credit card processing services.

Further modifications will occur to those skilled in the art and such are considered to fall within the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. A method of credit/calling card pay telephone communication, that comprises, providing local database, storage and programming intelligence at a telephone instrument unit for enabling virtually instantaneous call processing by the steps of locally prompting the user to enter credit/calling card number after dialing the number-to-be-called; locally checking card validity in self-contained local database; locally storing such information if checked as valid and immediately out-dialing the call on the telephone line; monitoring the line until the user terminates the call; locally storing the card number, number dialed, date, time and call duration as a transaction record of the call; at the telephone instrument unit, automatically initiating dialing a PC host computer through a local internal modem following one or both of a programmable number of calls or a predetermined time period; upon connection to the host computer, transmitting a batch of such transaction records to the host computer; and generating user billing information at said host computer, with the aid of the charged rate information stored in the computer local database.

2. A method as claimed in claim **1** and in which the transmission of said batch of such transaction records is effected together with a longitudinal redundancy check code.

3. A method as claimed in claim **1** and in which the further step is performed, if the telephone instrument unit has not reported transaction records to the host computer for a preset timeframe, of identifying such unit as a potentially malfunctioning unit.

4. A method as claimed in claim **1** and in which said host computer provides updating software and database information to the telephone instrument unit.

5. A credit/calling card pay telephone communication system having in combination with a telephone handset instrument unit comprising microphone, speaker and hook-sense electronics, locally disposed software, data base and storage means comprising a local credit authorization terminal and including internal modem means and microcontroller means for controlling the handset unit and the dialing thereof; said software providing for local data entry, user prompting, local card verification, call processing, call record management and call transaction reporting; and PC host computer means modem-connected to said system for receiving periodic reports automatically initiated by the telephone instrument unit itself from said unit of batches of calls, including dialed numbers and respective card numbers, date, time and call duration; and means at said host computer means for generating user billing information; and in which said unit software, database, storage and credit authorization terminal mans performs the following sequence of functions: clearing internal buffers and I/O ports; testing for valid telephone line presence and memory space; handshaking through said modem with the host computer means; responding to entry of user-dialed number-to-be-called with a prompt for application of the card information to the unit; checking validity of card number with locally stored database information, and, if valid, entering data as to card type, number or identity; dialing out the number-to-be-called on said telephone line and appending date and time of call to a call detail record; following a programmed wait period to allow for calling and called