ISDN MIS applications

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One of the most significant values of ISDN is the ability to provide network intelligence to the data processing world via the out of band "D" signalling channel. One of the most significant network data elements is the telephone number of the terminal that originated the call. This number is called the Subscriber Identification (SID). There are a variety of MIS applications that can be developed that would key off the SID such as a customer record look-up to support the service of an incoming call. This may even be integrated with the Automatic Call Distribution (ACD) in order to properly assign the call to a specific agent. These applications are normally classified as telemarketing applications. A generic ISDN MIS architecture is presented that will describe an integrated ISDN network to a premise based call distribution capability and access to a large remotely located host processor(s) containing

![ISDN MIS applications diagram]

Figure 1—The architecture starts with the ISDN network and the availability of the Subscriber Identification (SID) to the end user.

Figure 2—The next element of consideration is the termination of the ISDN primary rate interface by the ISDN premise controller. Large scale telemarketing applications, require that the incoming calls are distributed to a pool of available agents according to various algorithms. This Automatic Call Distribution (ACD) function will be, generally, a functional part of the ISDN Premise Controller.

Figure 3—The call is transported utilizing the ISDN Basic Rate (2B + D) to intelligent work stations (IWS) utilizing one of the "B" channels and providing the SID on the “D” signalling channel. The other “B” channel is utilized to maintain an open session with a data base on a large remote host that is connected via the ISDN network.

Figure 4—The SID is reformatted by the intelligent work station and an inquiry is immediately sent to the host. The voice terminal receives the call and optionally displays the SID on a small screen. Depending on the performance of the host, the completed customer record is displayed on the screen of the IWS. ISDN will provide 64Kbps data rate on the “B” channel and thus is able to provide sub-second response time if required. Generically, the intelligence of the network is passed over to the host application at the IWS location.
a large data base of customer information. Thereafter, schematics containing pre-ISDN elements are described that provide limited but functionally equivalent capability in anticipation of full deployment of ISDN.

Figure 5—Some of these capabilities may be available prior to the full deployment of ISDN. For example, AT&T may soon provide an Advanced 800 WATS service providing SID/ANI as an additional tariffed service.

Figure 6—Large scale premise PBX's such as the AT&T System/85 can provide primary rate interface to the network and provide sophisticated ACD processing.

Figure 7—The AT&T PBX can distribute the call via a DCP (2B + D) interface to an IWS. Further, it is possible to maintain concurrent host sessions via a primary rate interface to the host utilizing the EDS DMI370 interface device without the requirement for multiplexing T1 to a traditional front end processor (FEP).

In Summary, ISDN MIS applications are just around the corner. Implementation planning can begin today with implementation inplace tomorrow well in advance of the 1990's.