Microsoft® Windows NT™ TP4/CLNP/ES-IS

ISO Transport Addendum to Window Sockets Interface

ent Components specific to the ISO transport

Component	Description
wshisotp.h	ISO transport specific Windows Sockets extension header file
wshisotp.lib	Windows Sockets Helper DLL import library

Components :

Component	Description
wshisotp.dll	Windows Sockets Helper DLL for ISO transport

nction

a) Address Format : AF_ISO
b) Socket Type : SOCK_STREAM or SOCK_SEQPACKET
c) Protocol : ISOPROTO_TP4

Note: SOCK_SEQPACKET device type supports the message boundary concept unlike SOCK_STREAM

Example:

```
SOCKET s;
s = socket (AF_ISO, SOCK_STREAM, ISOPROTO_TP4);
```

parameter in the Windows Sockets Interface functions

The type of the parameters should be SOCK_ADDR_TP as shown below:

```
typedef struct sockaddr_tp {
        u_short tp_family;          /* Always AF_ISO */
        u_short tp_addr_type;       /* Always ISO_HIERARCHICAL */
        u_short tp_addr_len;        /* Length of the transport address <=52 octets */
        u_short tp_sel_len;         /* Length of the transport selector <=32 octets*/
        u_char tp_addr[ISO_MAX_ADDR_LENGTH]; /* buffer for transport address */
} SOCKADDR_TP, *PSOCKADDR_TP, *LPSOCKADDR_TP;
```

ssing Scheme

A Transport address comprises of two parts, one is the Transport Selector which is equivalent to the "port" in the TCP/IP world and the other is the Network Address or Network Service Access Point (NSAP) address.

The Transport Selector is used to uniquely identify a particular application that is making use of the ISO transport services. The maximum length supported for the field is 32 octets as per the NIST Stable Implementors Agreements SP 500-183, December 1990.

The term Network address refers to a local and user friendly name given to an end system, where as the NSAP address refers to a globally unique address that was assigned to the end system. The value of the NSAP is per the ISO 8348, Addendum-2 Network Layer Addressing standard. Per US GOSIP version 2.0 the maximum length of the NSAP can be 20 octets.

As the NSAP is the unique address that identifies a system on the network, it is used to exchange PDUs in a network. The value of the local network address and NSAP are configured during the installation of the OSI protocol stack. One can change these values through the Networks Control Panel Applet (NCPA).

The second part of the Transport Address in various Windows Sockets interface functions differs based on whether the address is local or remote. The second part should be the Network address whenever the address refers to the

local machine and it should be the NSAP whenever the address refers to the remote machine. This implies that the address in the bind() call should contain the Network Address value as it refers to the local machine address and addresses in the connect(), accept() contains the NSAP value as they refer to remote machine.

The distinction between Network address and NSAP is really needed only when there is a need to use a standardized globally unique NSAP value. Whenever the network connectivity is limited to a single administrative domain, the Network Address and the NSAP can take the same unique value in that domain, for example the system's name.
The header file wshisotp.h defines the above address structure and it also defines a Macro ISO_SET_TP_ADDR (sa_tp, port, portlen, nodelen) to facilitate programmer to fill in the ISO Transport Address structure.