

Communicating Across The Network With The WFW API

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**Demo code available on The Crescent
Software Developers BBS**

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WFWAPI.ZIP

APIs

NETBIOS

IPX/SPX

Windows Sockets

MailSlots

Named Pipes

Network DDE

NETBIOS Advantages

Transport independent protocol

Widely supported on all major networks

Provides connection and connectionless services

Natively supported in the Win16 API

Relatively easy to implement in DOS

NETBIOS Disadvantages

Unavailable directly from Visual Basic

Can be difficult to implement under
Windows

IPX/SPX

Novell's native protocol

Provides connection and connectionless services

IPX/SPX Disadvantages

Can not be called directly from Visual Basic

Very low level of abstraction

May require software from Novell

Windows Sockets Advantages

Transport independent protocol
Interface of choice for TCP/IP

Windows Sockets Disadvantages

Immature specification

Only supported on Windows platform

Mailslots Advantages

Transport independent protocol

High level of abstraction

Callable from Visual Basic and easy to implement

Connectionless service

Can be used to communicate between two applications on the local computer

Available on DOS, Windows, OS/2 and Unix platforms

Mailslots Disadvantages

No confirmation message is received

Connectionless service only

It is a “polled” API

Limit of 400 bytes per message when sent to entire workgroups

Only provides a one way path of communications

Poorly documented in the Windows for Workgroups “BETA” SDK

Major Mailslot bug in Windows for Workgroups 3.1

Named Pipes Advantages

Transport independent protocol

Provides a connection service

Provides a bidirectional path for communications

Uses a file metaphor - Standard file I/O can be used to access it

Is available on DOS, Windows, OS/2 and Unix platforms

Named Pipes Disadvantages

Pipes can only be created by a server process (I.E. Lan Manager-OS/2 or Windows NT)

Non-blocking I/O requires a callback routine making them difficult to implement in Visual Basic

Network DDE Advantages

Relatively easy to implement in Visual Basic
Few changes required to change a DDE application to a Network DDE application
The ability to remotely start an application

Network DDE Disadvantages

Same problems that regular DDE has

Rigid structure one must follow to use DDE

A successful connection doesn't always mean that

When remotely starting a Visual Basic application, you must retry a few times

The Past ... DOS

The Lan Manager PDK

Libraries for DOS, OS/2 and Windows

Dr. Dobbs Journal - April 1993

Undocumented Corner - The Undocumented Lan
Manager and Named Pipe APIs for DOS and Windows

The Future ... Win32

Supports all of the APIs discussed today

Improves on many of them for use in
multitasking/multithreaded programs

Well documented compared to the Windows
for Workgroups extensions