

THE NAME SERVER

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2600 Liberty Avenue
P. O. Box 2600
Pittsburgh, PA 15230
(412) 355-0900

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1. Theory

The Name Server allows processes to establish communications using textual names. In general, a process registers a Name / Port pair with the Name Server. Other processes can then ask the Name Server if it has a registration for a specific name.

If a name is not registered with the local Name Server, that Name Server broadcasts a request on the network. If the name is registered with some other Name Server on the network, that remote Name Server replies with a Port.

At the current time the Name Server is a portion of the Message Server process. The Message Server is responsible for extending InterProcess Communication (IPC) across the network. The fact that the Name Server and the Message Server are the same process is transparent to a client of the Name Server.

The definitions throughout this document are given in Pascal. If you are programming in the C language, please refer to the document "C System Interfaces" in the *Accent Languages Manual*. If you are programming in the Lisp language, see the document "Lisp Interaction with the Accent Operating System" in the *Accent Lisp Manual*. When FORTRAN becomes available under Accent, the definitions will be the same as in the C language.

2. Use

Communication with the Name Server is through a Matchmaker-generated interface. That interface can be found in module MsgN in the file MsgNUser.Pas in LibPascal.

MsgNUser is one of the system modules that are initialized for the client. There is no need to call the procedure InitMsgN.

The port that is used for communications with the NameServer is NameServerPort, defined in PascalInit.Pas in LibPascal.

2.1. Registering a name / port pair

```
Function CheckIn(  
    ServPort    : Port;  
    PortsName   : string;  
    Signature   : Port;  
    PortsID     : Port  
): GeneralReturn;
```

Abstract

CheckIn is used to register a Name / Port pair with the local Name Server.

Parameters:

ServPort The port that is used to communicate with the Name Server. It is NameServerPort from Pascalinit

PortsName The name that the client wishes to register

Signature Currently not used. Supply NullPort for this parameter

PortsID The port that is to be associated with PortsName. Clients of the Name Server who request a connection to PortsName will be given Send rights to PortsID. PortsID must have been previously allocated by the AllocatePort function, which is described in the "Kernel Interface" document in this manual

Returns:

Success Name was registered correctly
Failure Could not CheckIn the name

2.2. Finding a port associated with a name

```
Function Lookup(  
    ServPort : Port;  
    PortsName : string;  
    var PortsID : Port  
): GeneralReturn;
```

Abstract:

LookUp is used to obtain a port that is associated with a name.

Parameters:

ServPort The port that is used to communicate with the Name Server. It is NameServerPort from Pascalinit

PortsName The name that the client is looking for

PortsID Will be set to contain the port that is associated with PortsName. The caller of LookUp will be given send rights to PortsID

Returns:

Success The port PortsName was found and PortsID contains a port that can be used to communicate with it

NameNotCheckedIn
 The port PortsName was not found. PortsID is not valid

2.3. Deleting a name / port pair

```
Function CheckOut(  
    ServPort : Port;  
    PortsName : string;  
    Signature : Port  
): GeneralReturn;
```

Abstract:

CheckOut is used to remove a Name / Port registration from the Name Server.

Parameters:

ServPort The port that is used to communicate with the Name Server. It is NameServerPort from PascalInit

PortsName

The name that is to be removed

Signature Not used. Supply NullPort

Returns:

Success The name was removed

NameNotYours

The client tried to remove a name that it did not register

3. Predefined names

The following names are predefined by the system. They do not have to be registered with CheckIn.

[MachineName]EtherServer

Owned by the Network Server

[MachineName]RS232AServer

Owned by the RS232 process for A port

[MachineName]RS232BServer

Owned by the RS232 process for B port (PERQ2 workstations only)

[MachineName]GPIBServer

Owned by the GPIB I/O server

[MachineName]SpeechServer

Owned by the Speech Server

[MachineName]FloppyServer

Port for access to the floppy driver

[MachineName]SesNetPort

File System connection for remote use

[MachineName]EnvNetPort

Owned by the Environment Manager

