

Intelligent Devices
Intelligent Control
Advanced User Guide



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INSTALLING INTELLIGENT CONTROL IN A CLIENT\SERVER ENVIRONMENT

Intelligent Control is a Windows Based software program that allows you to easily communicate with and operate any NTCIP Devices. This software can be run under Windows 98, Windows 2000, Windows NT and Windows XP.

Intelligent Control can manage many Devices from one or more remote computers, or a laptop can be temporarily connected to a Device and used to operate that Device using Intelligent Control. While it is possible to use more than one computer to operate more than one Device, remember that a Device can only be connected to one computer at a time. Intelligent Control software can simultaneously communicate with more than one Device.

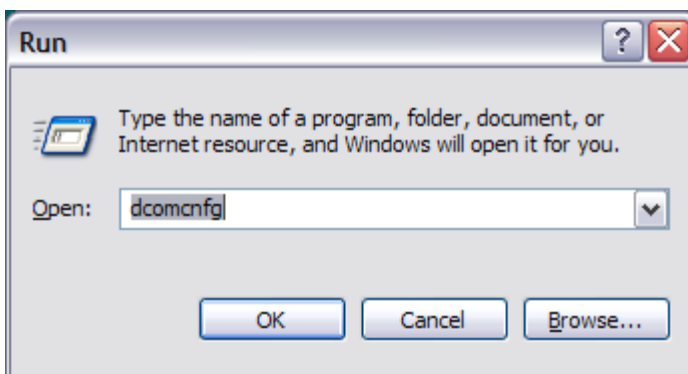
If you are installing Intelligent Control in a client server environment, we strongly advise that all clients and the server run the identical version of the software. In other words, if you upgrade any one client or the server, you must update them all to the same version. The DataManager and Comm Server can each be on different computers. The DCOM settings will point each client to the source of the DataManager and the Comm Server.

Installing Intelligent Control on the Server

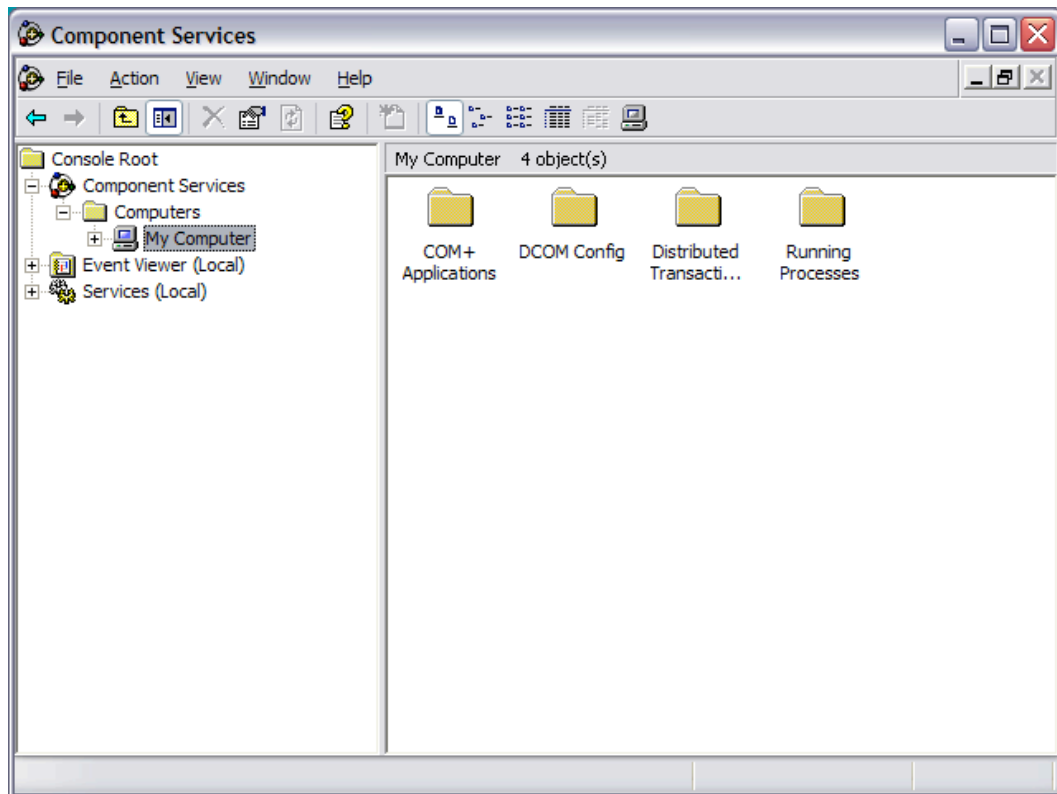
Before installing Intelligent Control, please ensure that the hardware on your system is configured for communication with your devices. If dial up connection is being used, ensure that a modem has been installed and configured and that there is a telephone line connected to the modem. If direct connection is being used, ensure that the required ports are available for use and that you know which device is connected through which port.

Prior to installing Intelligent Control on the Server, the DCOM settings must be updated on the Server Computer as follows:

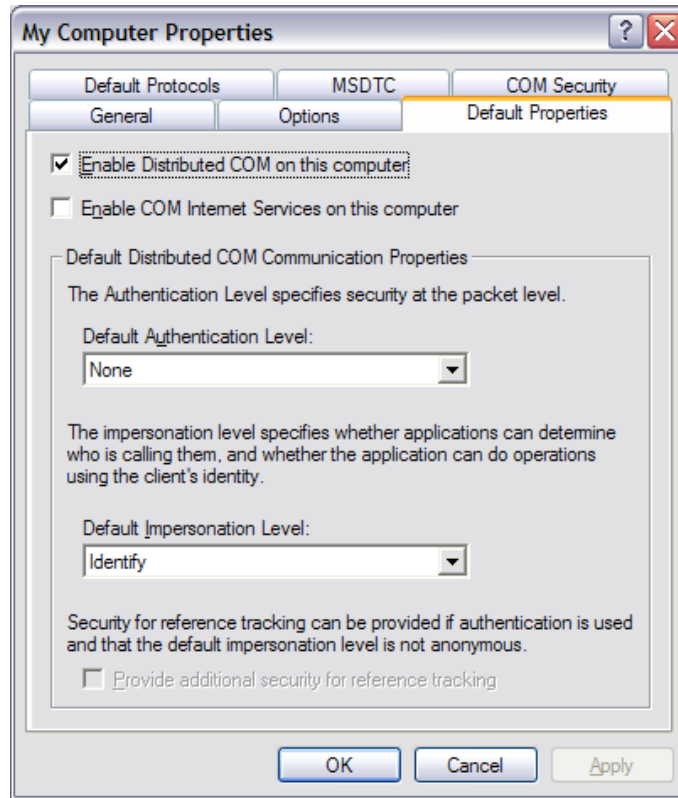
1. Click Start
2. Click Run
3. Enter DCOMCNFG and click OK



4. Open Component Services (click on the + sign).



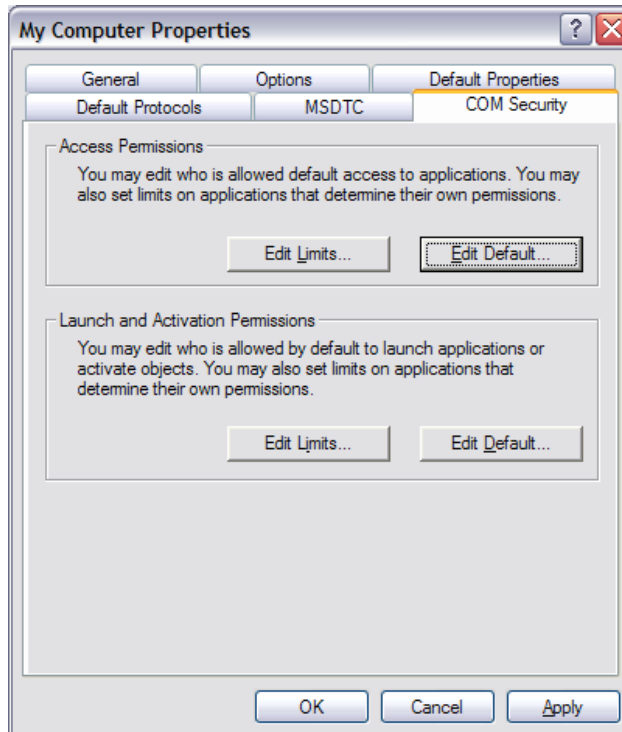
5. Select My Computer and right click the mouse.
6. Select Properties.
7. Click on the Default Properties Tab:



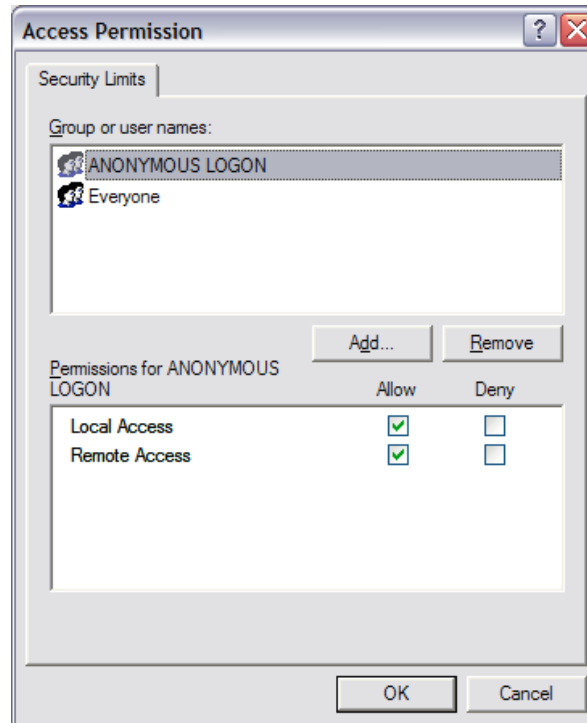
The settings should be as follows:

- Enable Distributed COM on this computer – checked on.
- Default Authentication Level – None
- Default Impersonation Level – Identify

8. Click on the COM Security Tab.



Select Edit Limits for Access Permissions

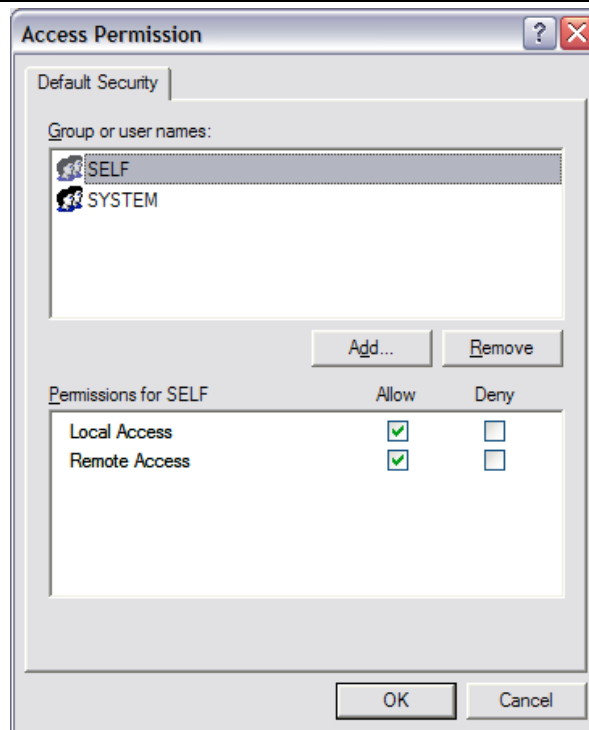


The settings should be as follows:

Allow should be checked for Local Access and Remote Access for all Groups and User Names.

Update as required and click OK.

Select Edit Default for Access Permissions.

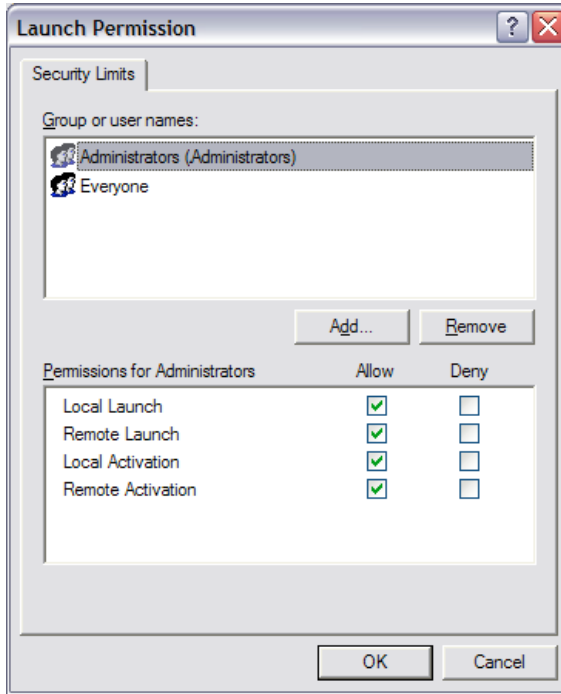


The settings should be as follows:

Local Access and Remote Access should be checked on for all Groups and User Names.

Update as required and click OK.

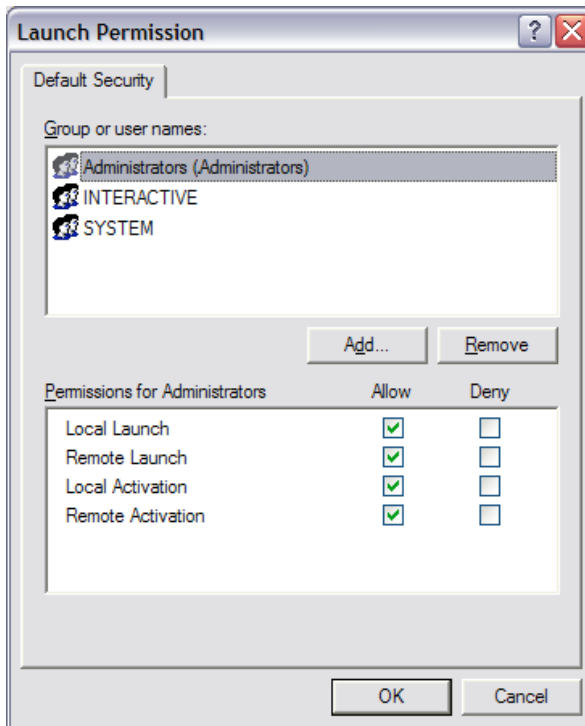
Select Edit Limits for Launch and Activation Permissions:



Local Launch, Remote Launch, Local Activation and Remote Activation must be checked on for all Groups and User Names.

Update as required and click on OK.

Select Edit Default for Launch and Activation Permissions:



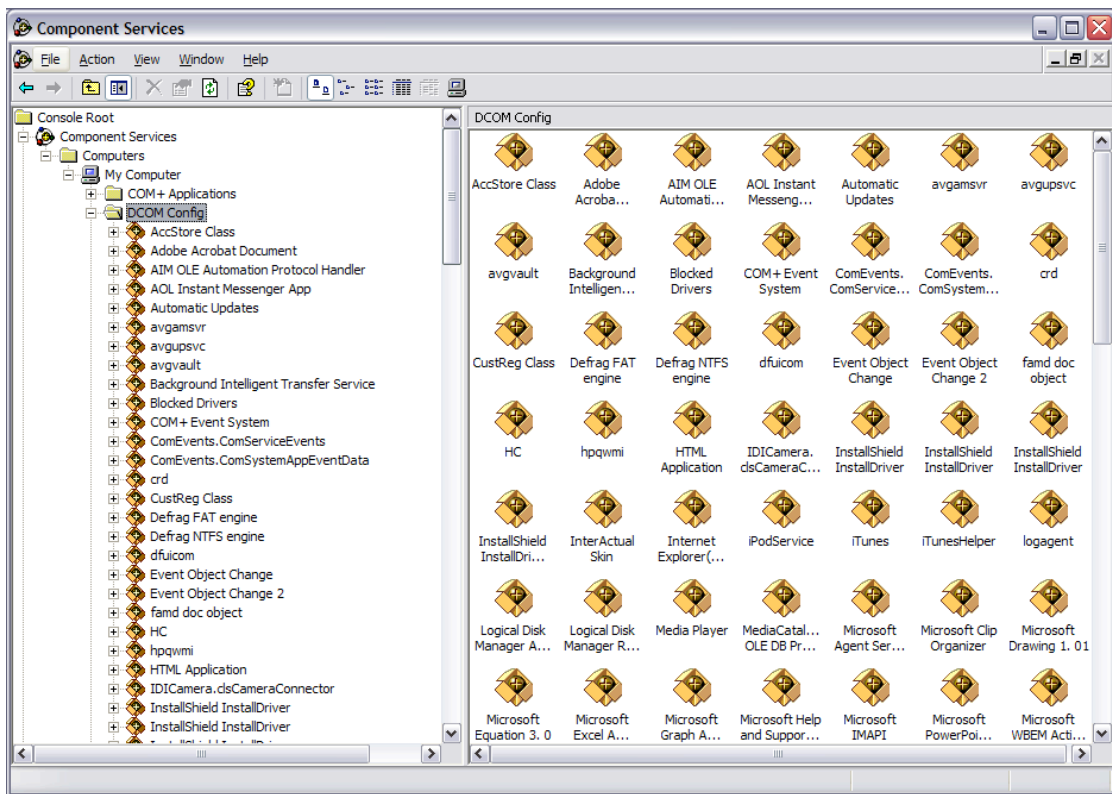
Local Launch, Remote Launch, Local Activation and Remote Activation must be checked on for all Groups and User Names.

Update as required and click on OK.

- 9. Set the following permissions for each individual component that is to run on the server. The components are:

- NTCIPDataManager.DataManager
- NTCIPPollManager.PollConnector
- NTCIPProgressStatus.clsInterface
- NTCIPServer.CommConnector

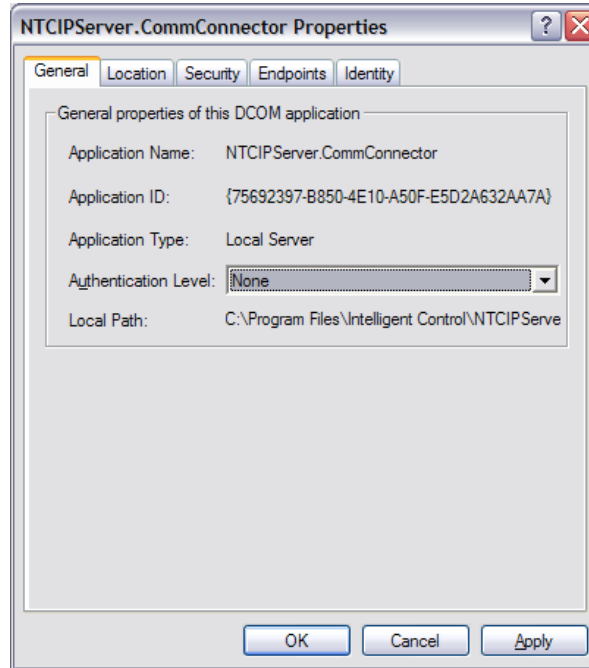
Expand My Computer.
Expand DCOM Config.



Scroll down to the required component:

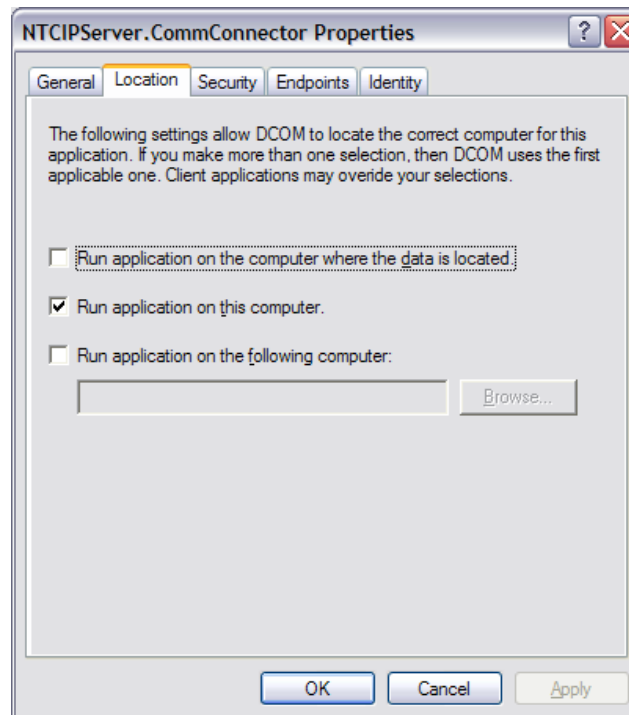
Highlight the required component and right click the mouse. Select properties:

On the General Tab – Authentication Level must be set to None.



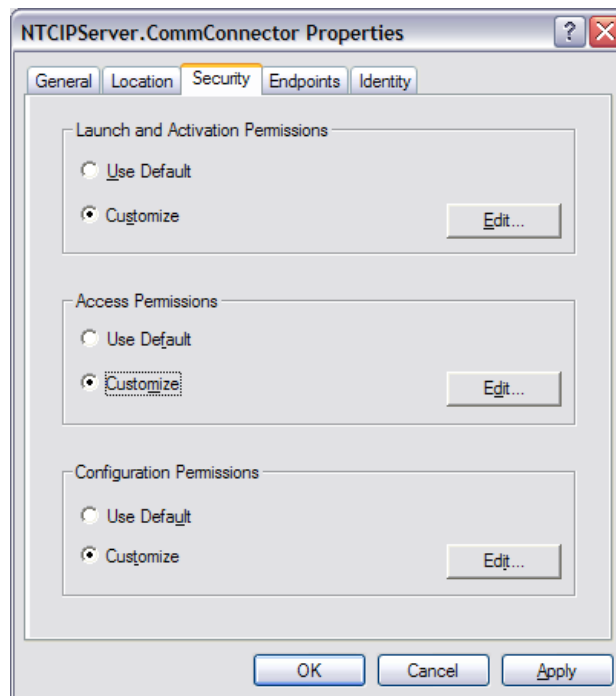
Update as required and click OK.

On the Location Tab, Run application on this computer must be checked.

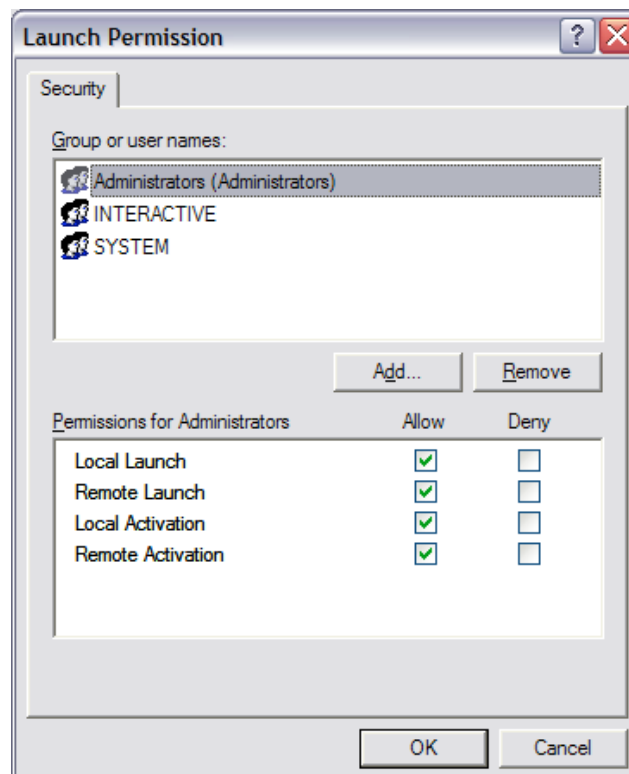


Update as required and click OK.

Select the Security Tab.



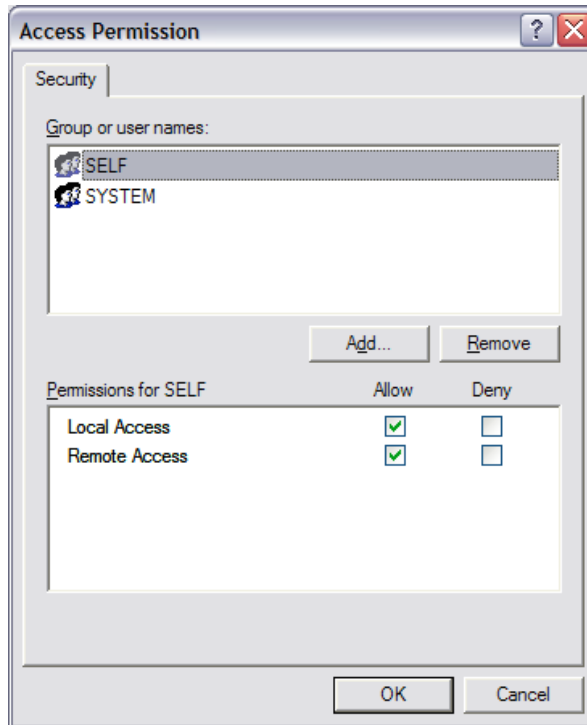
Click on Customize for Launch and Activation Permissions:



Local Launch, Remote Launch, Local Activation and Remote Activation must be checked on for all Groups and User Names.

Update as required and click on OK.

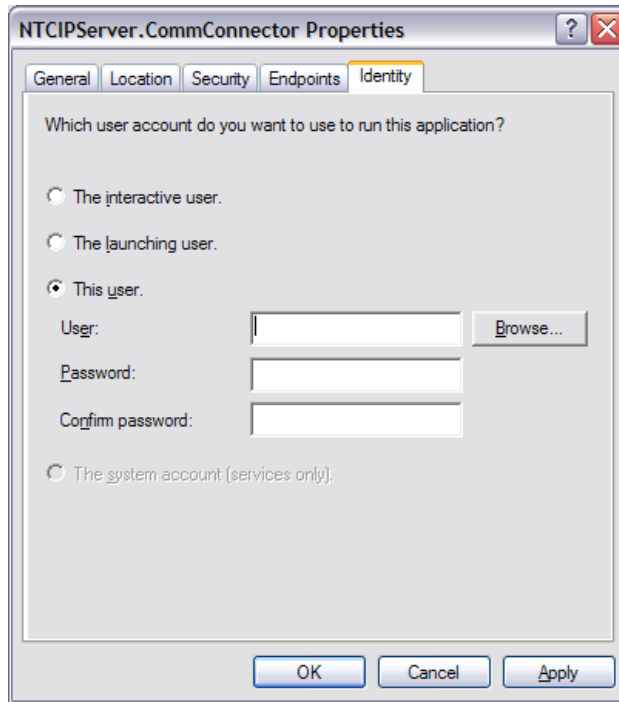
Click on Customize for Access Permissions.



Local Access and Remote Access must be checked on for all Groups and User Names.

Update as required and click on OK.

Select the Identity tab.



On the Identity Tab, This user must be checked. You must choose a User that exists on the computer. To see which Users have been created on the computer, select Control Panel from the Start menu and click on Users. Enter and confirm that User's Password.

Note that for database access, you need to select a user that has write permissions. Usually, this would be an Administrator Level User.

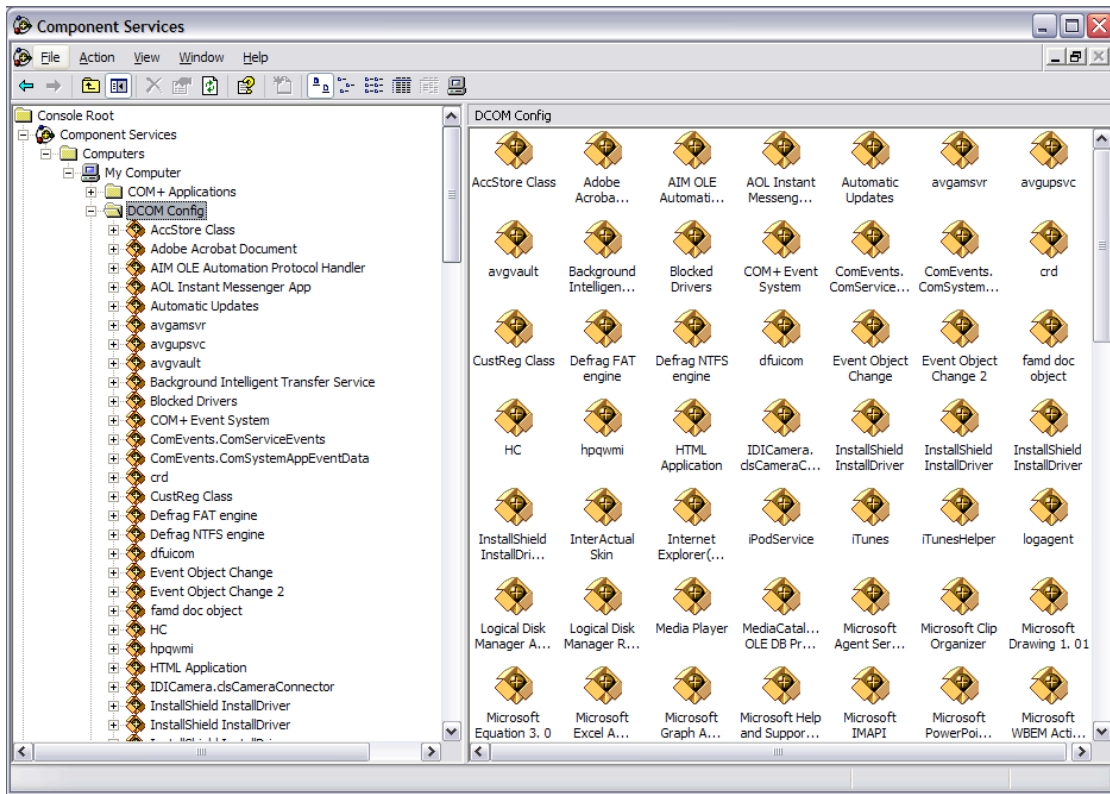
Installing Intelligent Control on the Client Computer

On the client computer, repeat steps 1 though 8 above.

1. Repeat the following steps for each of the Components listed below:

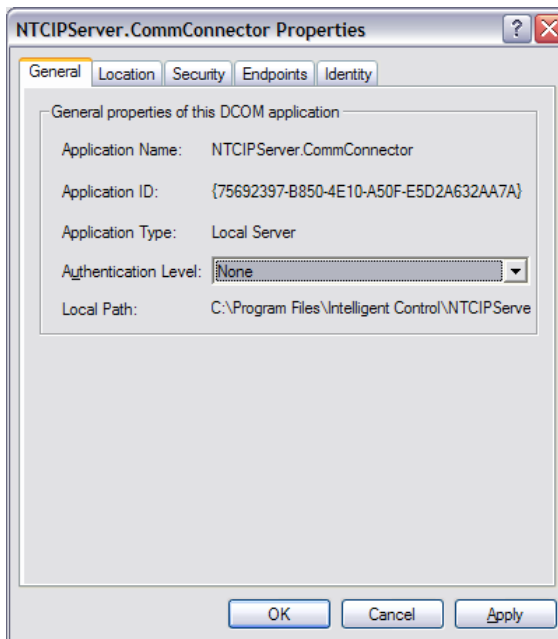
- NTCIPDataManager.DataManager
- NTCIPPoll Manager.PollConnector
- NTCIPServer.CommConnector

Expand My Computer.
Expand DCOM Config.



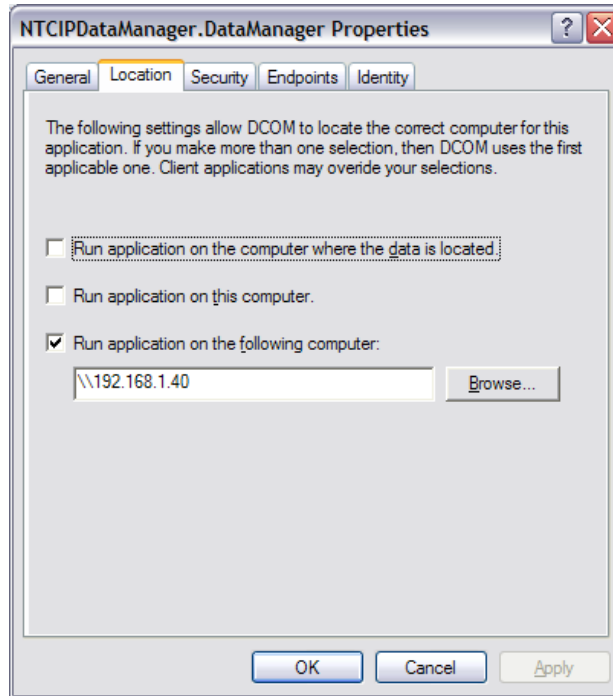
Scroll down to the required component and highlight the required component and right click the mouse. Select Properties.

On the General Tab – Authentication Level must be set to None.



Update as required and click OK.

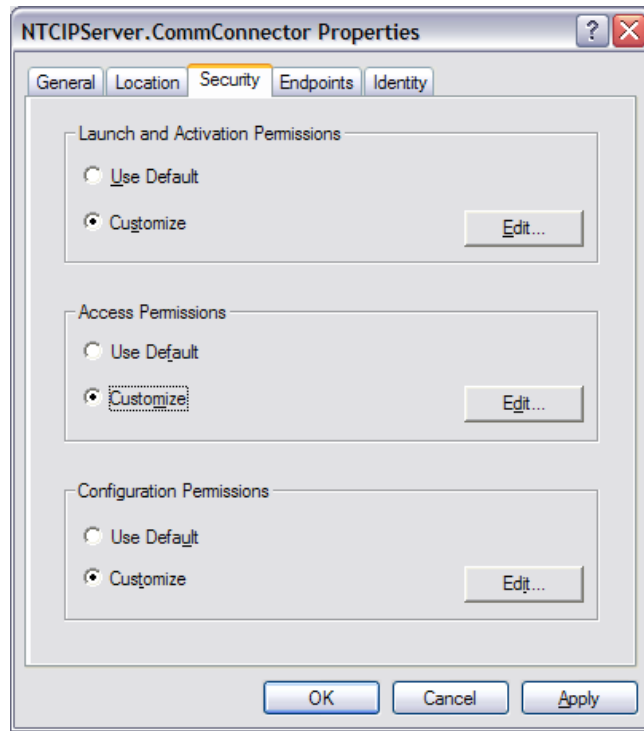
On the Location Tab, Run application on the following computer must be checked. Enter the Name or IP Address of the Computer that is being used as the location for the component.



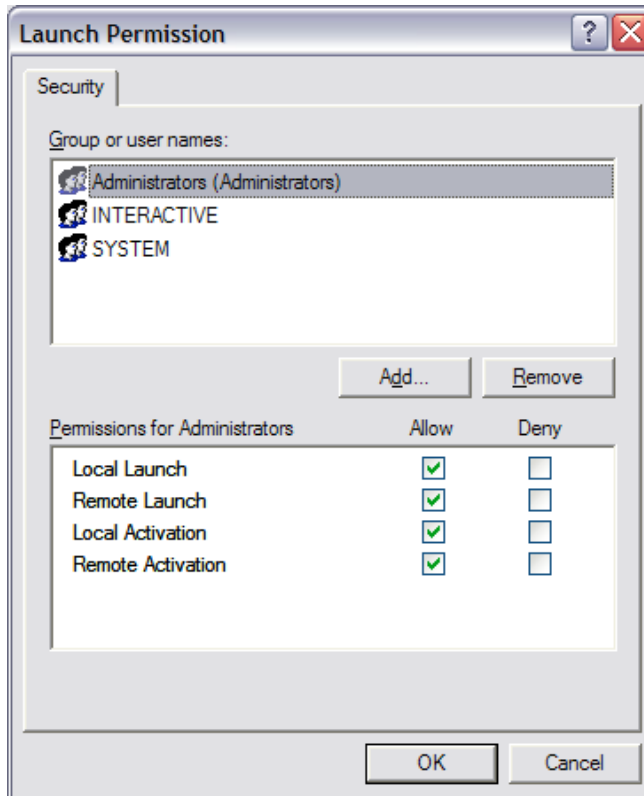
Update as required and click OK.

Select the Security Tab.

Click on Customize for Launch and Activation Permissions.

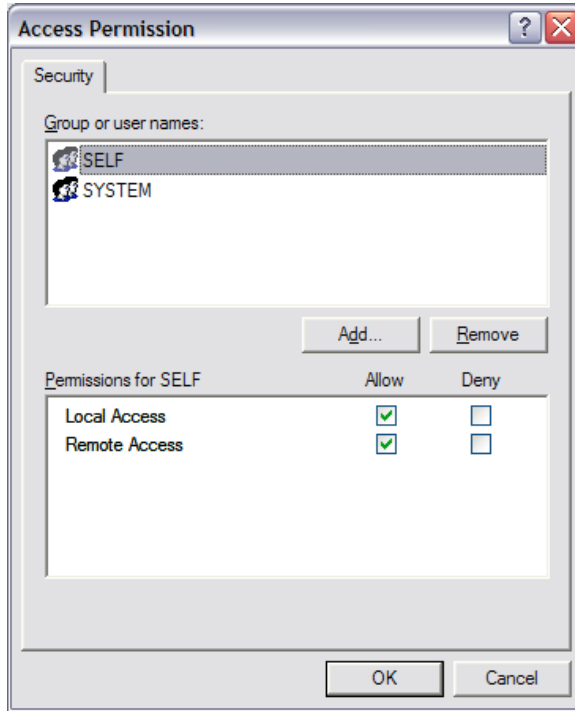


Local Launch, Remote Launch, Local Activation and Remote Activation must be checked on for all Groups and User Names.



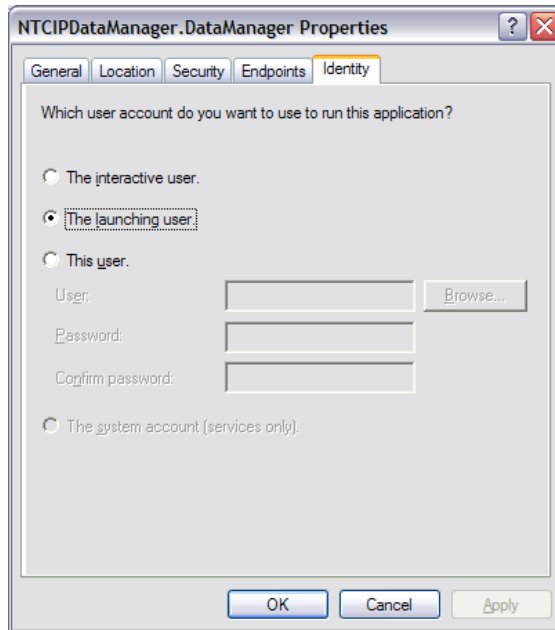
Update as required and click on OK.

Click on Customize for Access Permissions.



Local Access and Remote Access must be checked on for all Groups and User Names. Update as required and click on OK.

Select the Identity Tab.



On the Identity Tab, The Launching User must be checked.

Remember to repeat these steps for each of the 3 components.

You are now ready to run Intelligent Control. If you launch Intelligent Control and you are presented with a warning message asking if the software is Safe and should be unblocked, select Unblock. Then close Intelligent Control and launch it again.

1. Install the standard system.

- i. Load the CD into the CD drive on the computer.
- ii. Select Start and then Run.
- iii. Either browse to setup.exe, or enter the drive letter and setup.exe in the command line (e.g. "D:\Intelligent Control Setup v1.0.5.exe"— where D: is the CD Drive on your computer and v1.0.5 is the current version number).
- iv. Follow the prompts to install the system.

2. Copy the Database

- i. Copy NTCIPServerDB.mdb from the disk provided into the same directory as IntelligentControl.exe. This file contains the database, configured with your devices, that is used by Intelligent Control.
- ii. Check the read-only status of the database and if the read only check box is checked, uncheck it so that the access reverts to read and write. (To check this status, highlight the NTCIPServerDB.mdb file in the directory in which it was installed. Right click the mouse and select Properties. The read-only check box is positioned at the bottom of the properties window.)

3. Copy Maps and Icons

Copy the Maps and Icon directories from the disk provided into the Intelligent Control directory (the same directory in which IntelligentControl.exe resides). The Map directory contains local area maps for your installation and the Icons directory contains the Icons that will be used on the maps.

4. Start Intelligent Control

Once Intelligent Control is installed on the computer, open the software by clicking the shortcut from the desktop. If Intelligent Control has not yet been installed, refer to the section headed Installing Intelligent Control in this guide.

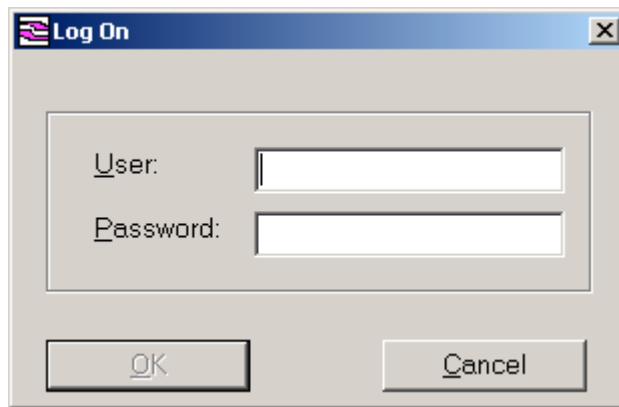
Click on this icon to open Intelligent Control:



The following screen will be displayed while the system is loading.



Once the system is loaded, the Log On screen will be displayed:



Enter a User name and a Password. The system is delivered with 3 Users and Passwords already created. These are:

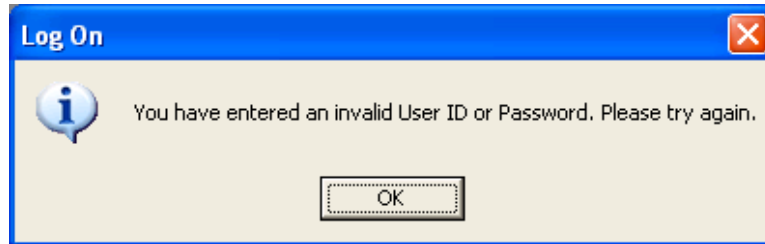
User	Password	Access Level
Level1	1	Operations
Level2	2	Maintenance
Level3	3	Administration

It is recommended that new Users be added and the standard ones deleted so that complete control is maintained over who has access to the system, and at which level. The Administration User has full access to the system. Use this User and Password to administer Users. Full details of adding and deleting users are included in the Operators section of this User Guide (located in the Administration section).

Note that the Administration user cannot be deleted if another Administration user has not been created. It is advisable to leave the Administration access (as defined on the

Access Levels form) to read-write for all functions so that at least one level always has access to the full functionality of the system.

If an incorrect User or Password is entered, the following message will be displayed:



Re-enter the User ID and/or Password.

Selections from the Main Menu (File, Operations, Maintenance, Administration, Window and Help) will not be accessible until you have successfully logged on.

5. Check the Device Configuration in the Database

To complete the installation process, check that the configuration of the Devices on the system is correct.

To access the Device configuration, click on Administration, Database and select Devices. The database will open so that you can check the Device information. Full details for Devices, Device Types and Connections configuration are contained in the Database section of this User Guide.

6. Locate Maps and Link Icons

The Maps and Icons directories contain the maps and icons that you will need. You will need to point Intelligent Control to these maps and icons. Full details of this are contained in the Maps section of this User Guide.

BLOCK BUILDER

1. Select the Device Type

2. Click on the Blocks tab to add a new block or select an existing Block.

3. Click on the Block details tab to add objects to a new Block or edit Objects in an existing Block.

4. Click on the Object List to add Objects to the selected Block

5. Click here to add the selected object to the Block

2 a. Click Details to Add to create a new block or highlight an existing block.

The screenshot shows the 'Configure Device Type' window for 'ASC 170'. It includes a 'Configure Device Type' section with radio buttons for 'Portable Sign', 'ASC 170', and 'ASC Peak 1800'. Below is the 'ASC 170: Select Objects for Blocks' section with an 'Object' dropdown menu set to 'activeVolumeOccupancyDetectors' and a 'Data Type' dropdown set to 'INT'. A description explains that this object indicates the number of rows in the volume detector table. An 'Add Object to List' button is visible. The 'Blocks' tab is active, showing a table with one row: '1', 'idiBlockData.1', '1.3.6.1.4.1...', 'ASC 170 Block 1', 'ASC 170', and 'Block Object'. The 'Block Details' tab is also visible. A 'Details to Add' panel on the right has a 'Block No' dropdown and a 'Block Description' text field. A 'Close' button is at the bottom right.

No	OID	Description	Description	Device Type	Status
1	idiBlockData.1	1.3.6.1.4.1...	ASC 170 Block 1	ASC 170	Block Object

Repeat steps 3-5 for each object that is to be added to the Block.

Intelligent Control - [Configure the Current Blocks]

File Operations Maintenance Administration Window Help

Configure Device Type

Portable Sign
 ASC Multi 820A OSAM
 Sensor RTMS
 ASC 170
 ASC Traco 390
 Camera NTCIP
 ASC Peek 1880
 ASC PC3000

ASC 170: Select Objects for Block Details

Object: activeVolumeOccupancyDetectors
 Data Type: INTEGER
 Base OID: 1.3.6.1.4.1.1206.4.2.1.2.5.3.0

Description:
 The number of detectors in this device. This object indicates how many rows are in the volumeOccupancyTable object. There shall be a row for every detector that is collecting volume or occupancy data (refer to detectorOptions in the detectorTable).

Add Object to List

Object list

No	OID	Description	OID	Byte Count	Description	Format	Status
1	idiBlockID.1		1.3.6.1.4.1...	1	Vehicle Recall	Bit	Detail Object
2	idiBlockID.2		1.3.6.1.4.1...	1	Pedestrian Recall	Bit	Detail Object
3	idiBlockID.3		1.3.6.1.4.1...	1	Red Lock	Bit	Detail Object
4	idiBlockID.4		1.3.6.1.4.1...	1	Yellow Lock	Bit	Detail Object
5	idiBlockID.5		1.3.6.1.4.1...	1	Permit	Bit	Detail Object
6	idiBlockID.6		1.3.6.1.4.1...	1	Ped Phases	Bit	Detail Object
7	idiBlockID.7		1.3.6.1.4.1...	1	Lead Phases	Bit	Detail Object
8	idiBlockID.8		1.3.6.1.4.1...	1	Double Entry	Bit	Detail Object
9	idiBlockID.9		1.3.6.1.4.1...	1	Sequential Timing	Bit	Detail Object
10	idiBlockID.10		1.3.6.1.4.1...	1	Start Up Green	Bit	Detail Object
11	idiBlockID.11		1.3.6.1.4.1...	1	Overlap A	Bit	Detail Object
12	idiBlockID.12		1.3.6.1.4.1...	1	Overlap B	Bit	Detail Object
13	idiBlockID.13		1.3.6.1.4.1...	1	Overlap C	Bit	Detail Object
14	idiBlockID.14		1.3.6.1.4.1...	1	Overlap D	Bit	Detail Object

Block to View: 1

Details to Add

Description:

Byte Count:

Format:

Update Database Table Close

4/13/2005 12:31 PM Level3 logged on Time out 60 minutes

CONFIGURING FORM ICONS

The Icons that are displayed when Forms are opened are soft icons and can be modified at any time. The Icons that are used for the forms are contained in a directory called Form Icons that can be found in the Intelligent Control Directory. Each Icon has a name that directly corresponds to the name of the form that will display it.

The following is a list of all the forms in Intelligent Control and the menu function that opens them.

Menu item	Form/Icon Name
File, Log On	
File, Change Password	
File, Timeout	
File, Extended Logging	
File, Poll from Database	
Operations, Sign Control	frmMsgControl
Operations, Sign Control, Add/Edit Message	
Operations, Sign Control, Sequence	frmsequenceMessage
Operations, Edit Schedules	frmSchedule
Operations, Operator Comments	frmOperatorComments
Operations, View Map (Bitmap version)	frmBMMapDeviceDisplay
Operations, View Map (GIS version)	frmGISMapDeviceDisplay
Operations, Camera Control	frm
Operations, Scenarios and Amber Alerts	frmScenarioTreeView
Operations, Incident Management	frmIncidentManagement
Operations, Controller Upload and Download	frmUploadDownload
Maintenance, Archive and Restore	frmArchiveRestore
Maintenance, Size Operator Log	frmEventLogSize
Maintenance, Bulk Operations	frmBulkOperations
Maintenance, Brightness Control	frmBrightnessControl
Maintenance, Sign Summary	frmSignSummary
Maintenance, Reports	frmReportSelection
Maintenance, Error Log	frmErrorLogs
Administration, Map Management (Bitmap version)	frmBMMapManagement
Administration, Map Management (GIS version)	frmGISMapManagement
Administration, Icon Management	frmIconManagement
Administration Link Icon to Device Type	frmLinkIconToDeviceType
Administration, Place Icon on Map (Bitmap version)	frmBMMapDeviceEdit
Administration, Place Icon on Map (GIS version)	frmGISMapDeviceEdit
Administration, Place Icon on Map, Configure Log	frmConfigureDeviceTypeLogs
Administration, Place Icon on Map, Configure Log, Configure Grid	frmConfigureLogs
Administration, Scenarios and Amber Alerts	frm
Administration, Block Builder	
Administration, Intersection Configuration	
Administration, Operators, Add, Delete, Edit	frm

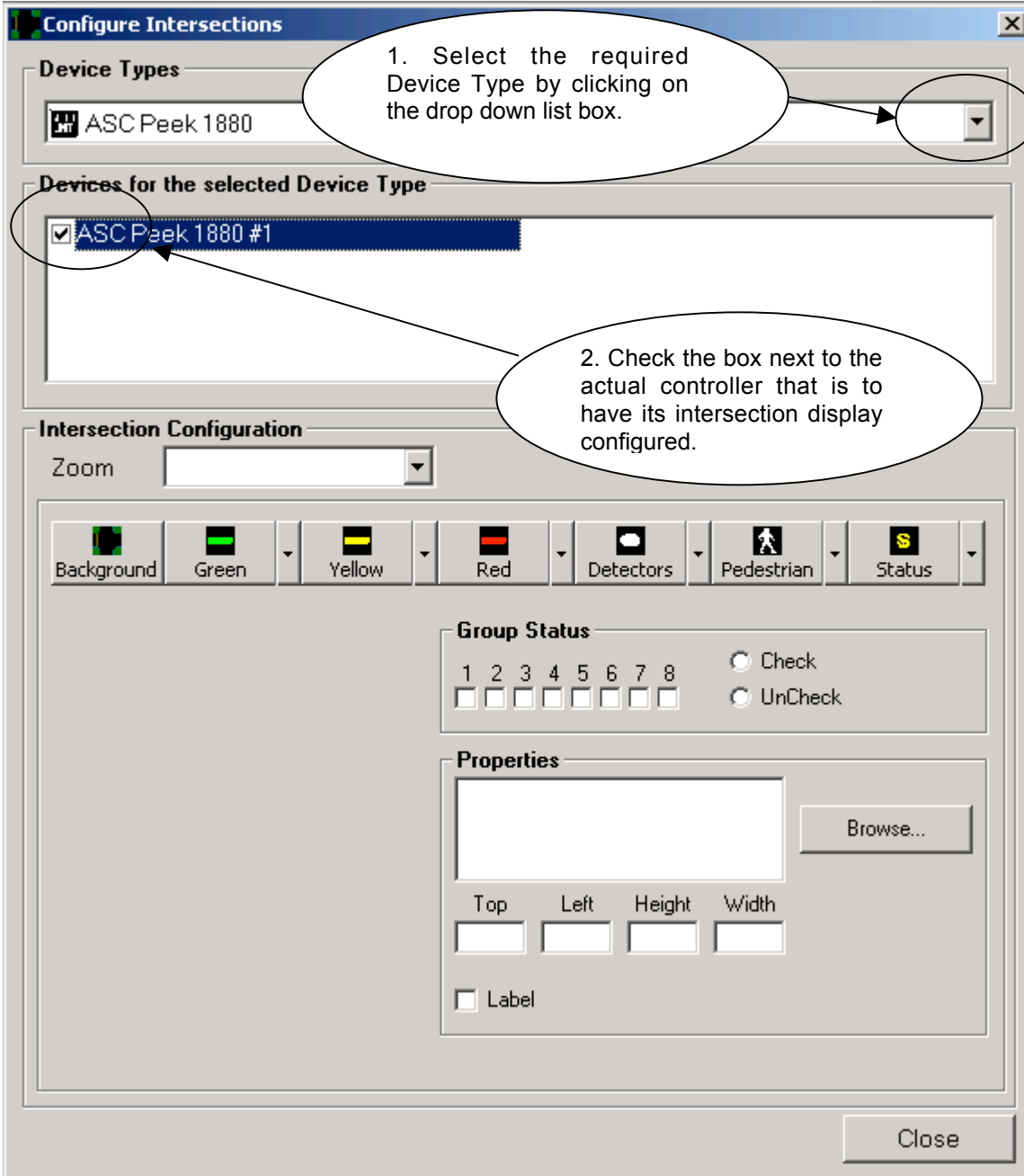
Administration, Operators, Access Levels	frmAccessLevels
Administration, Operators, Profiles	frmProfiles
Administration, Operators, Currently Logged On Users	frmCurrentUsers
Administration, Edit Master Fonts	
Administration, Device Security	frmDeviceSecurity
Administration, Database, Devices, Overview	frmOverviewDevices
Administration, Database, Devices, Add, Delete, Edit	frmDevices
Administration, Database, Device Types, Add, Delete, Edit	frmDeviceTypes
Administration, Database, Connections, Overview	frmOverviewConnections
Administration, Database, Connections, Add, Delete, Edit	frmConnections

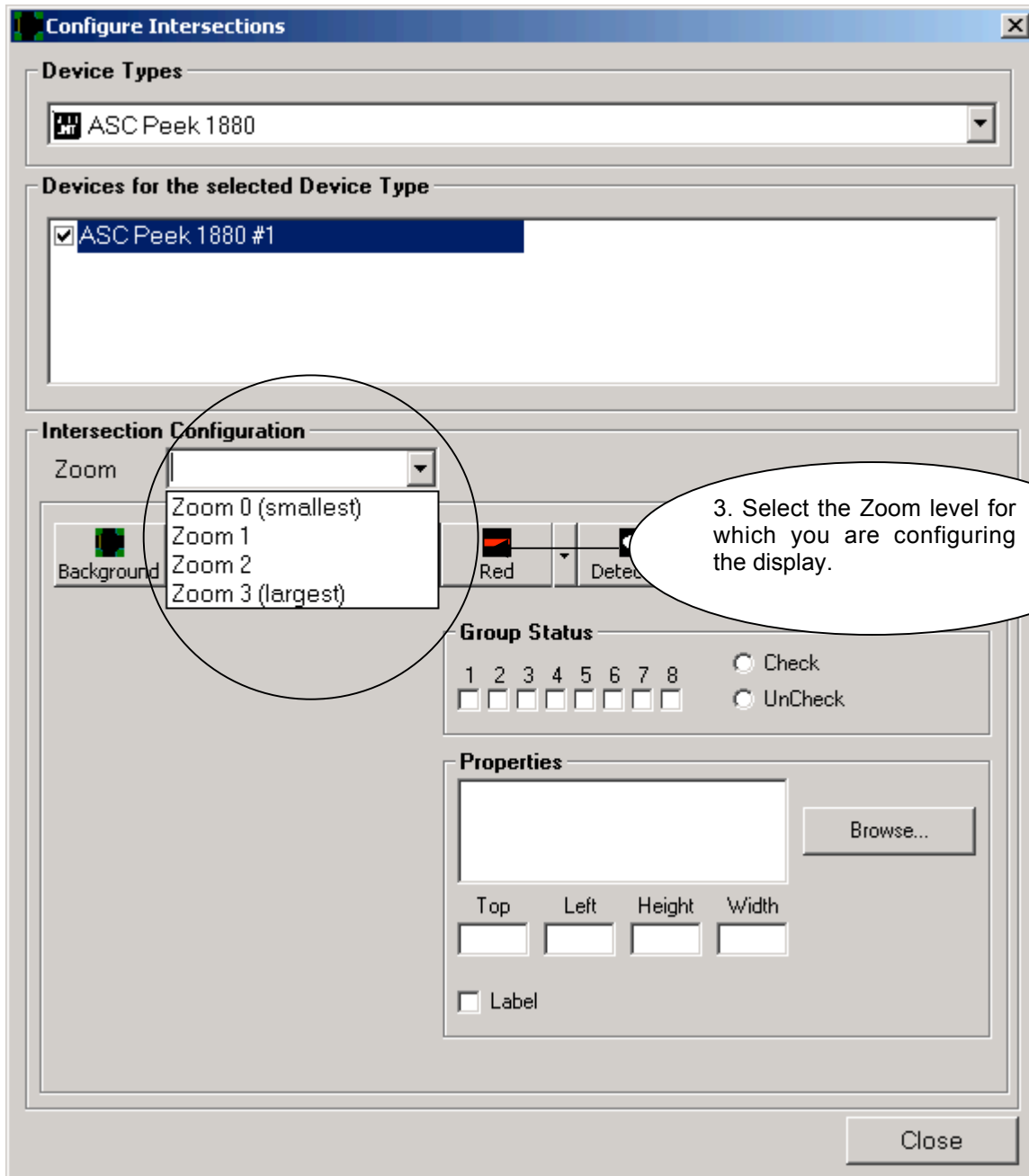
To add a new icon for a form, place the .ico file in the Form Icons directory and then rename it to the name of the form on which it should be displayed.

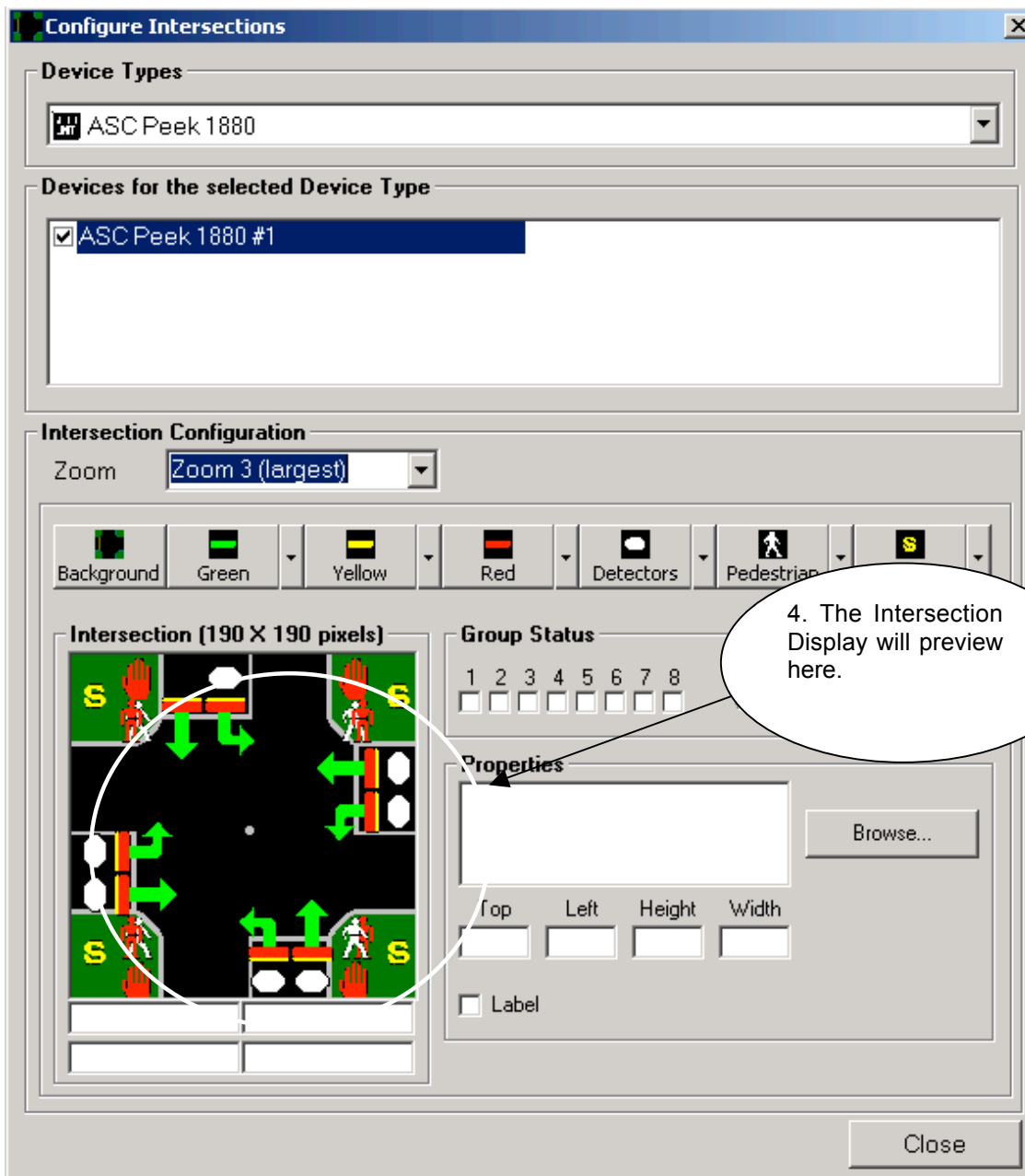
If a “not found” icon is displayed in the bottom task bar of Intelligent Control when a form is opened, this means that there is no Icon with the same form name in the Form Icons directory. Check the directory and make sure that the form name exactly matches the Icon name. If there is no corresponding Icon, add the Icon as described above.

CUSTOM INTERSECTION DISPLAYS

Intelligent Control allows you to customize the look and feel of each intersection that is displayed on a Map.



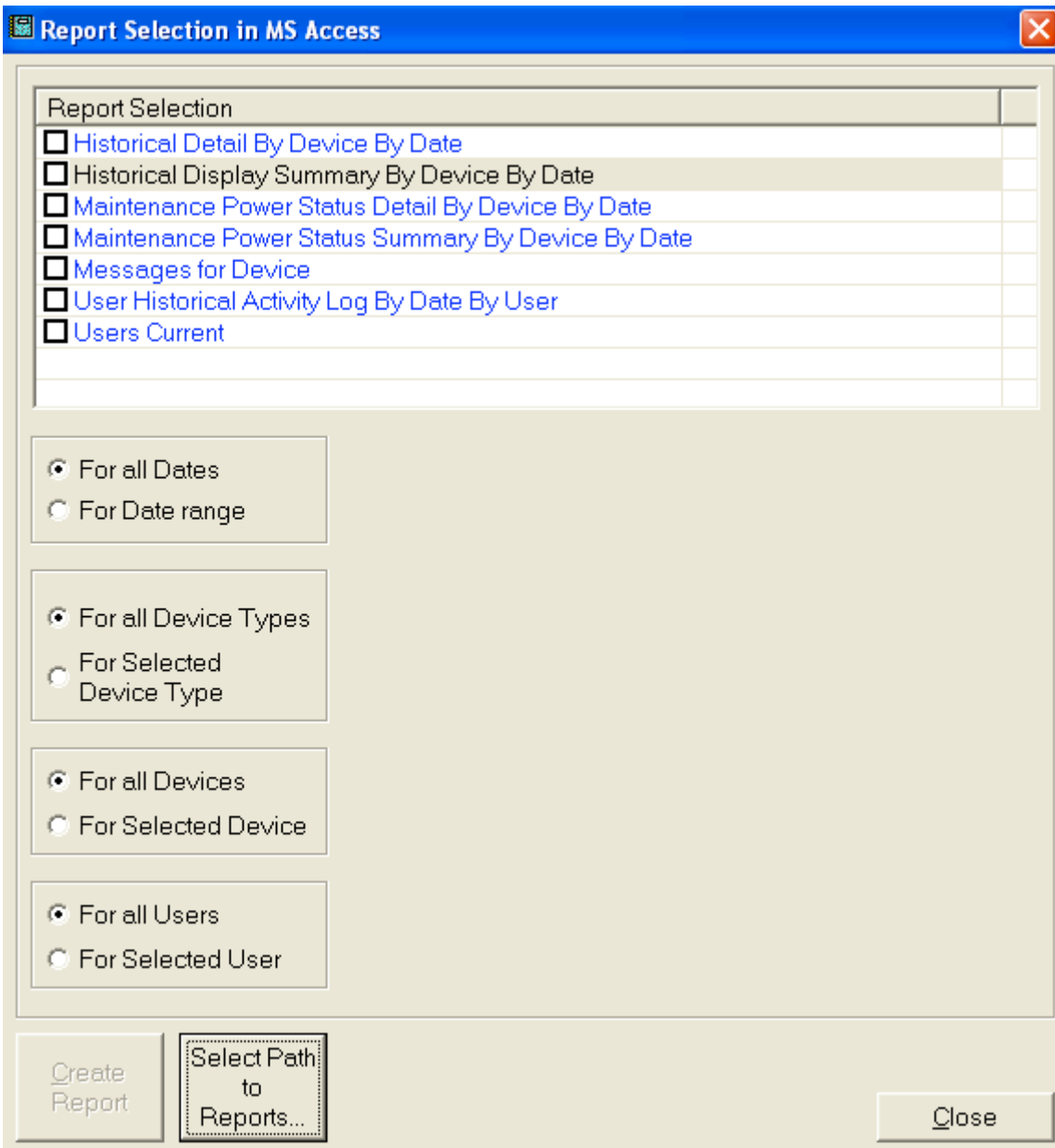




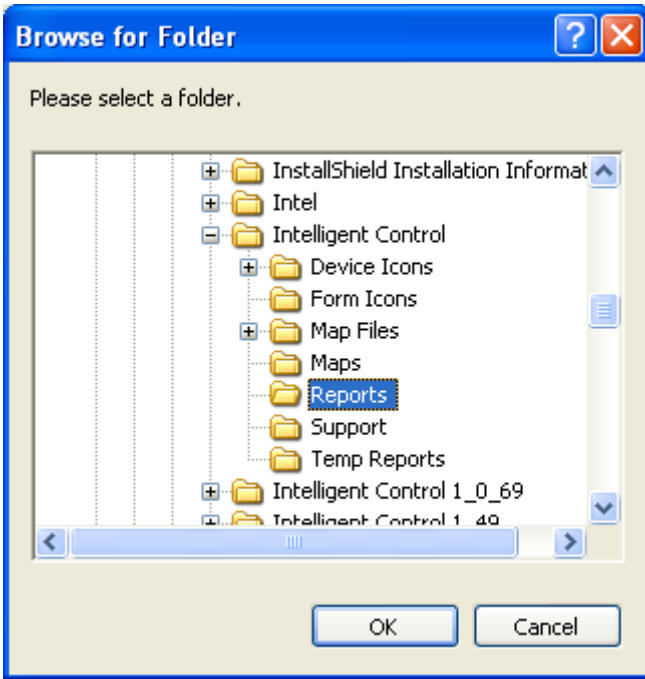
REPORTS

Intelligent Control uses standard Access reports. The reports that are created are stored in a directory of your choice. To indicate which directory is to be used for the reports, do the following:

1. Select Reports from the Maintenance menu.
2. The following screen will be displayed: (Note if you get a Security warning when the system opens Access, click on Open to open the Reports page)

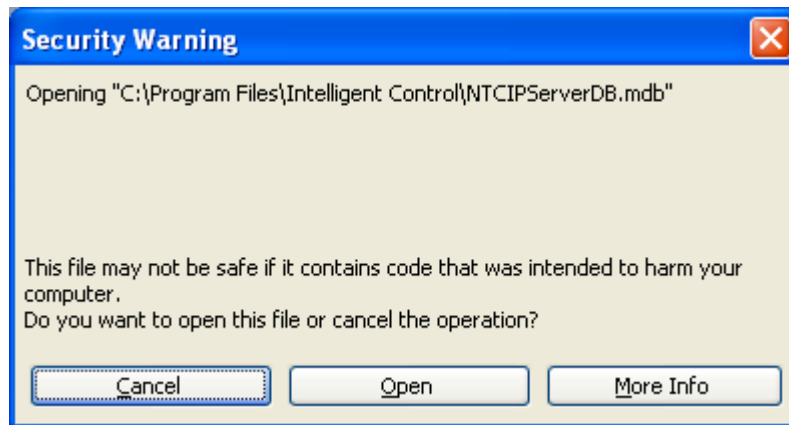


Click on Select Path to Reports and navigate to the required directory – typically Intelligent Control\Reports. This is the directory into which all the reports that you run will be saved as Word documents.

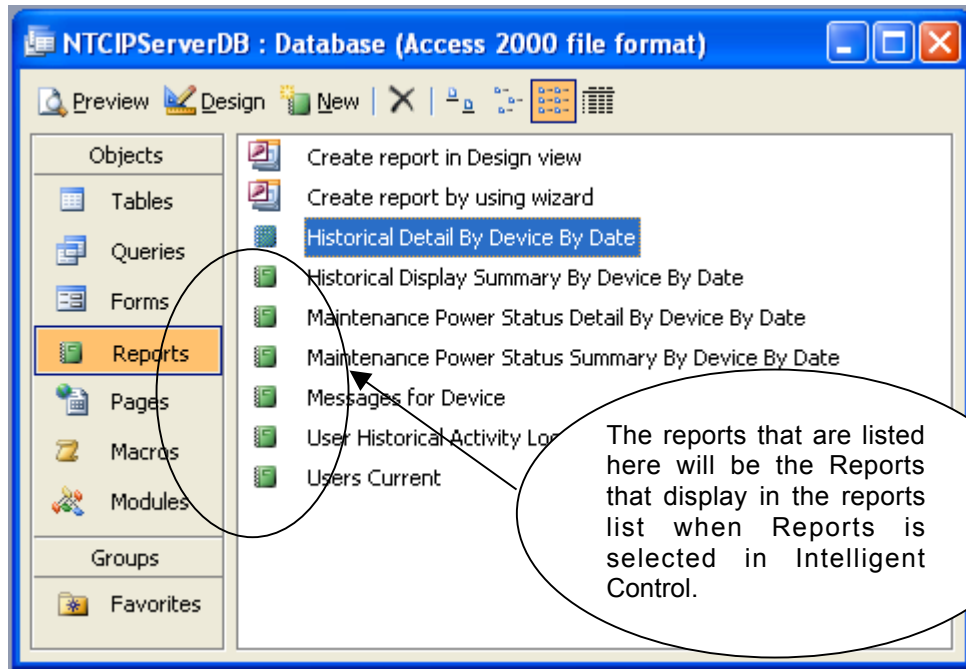


To create a new report, open the Intelligent Control database. Navigate to the Intelligent Control directory on your computer and double click NTCIPServerDB.mdb.

If you are prompted with a security message, click on Open to continue opening the database.



Click on the Reports Object.



You can either create a new report in Design View or using the Wizard. The following is an example of the look and feel of the reports that are included with Intelligent Control:

Activity Log Report By Date By User			<i>Tuesday, April 19, 2005</i>
<i>Date</i>	<i>Time</i>	<i>Event Log Text</i>	<i>EventComments</i>
<i>User: JSmith</i>			
5/26/2004	1:52:18 PM	5911 PSC (5911 (PSC) Grand Forks): New Message	
5/26/2004	1:53:00 PM	5911 PSC (5911 (PSC) Grand Forks): Get Current Message	
5/26/2004	1:53:00 PM	5911 PSC (5911 (PSC) Grand Forks): Set Current Message	
5/26/2004	1:53:00 PM	5911 PSC (5911 (PSC) Grand Forks): Get Current Message	
5/26/2004	1:53:00 PM	5911 PSC (5911 (PSC) Grand Forks): Set Current Message	
5/26/2004	1:56:39 PM	5911 PSC (5911 (PSC) Grand Forks): Get Current Message	
5/28/2004	10:14:55 AM	5902 PSC (5902 (PSC) Dickinson): Send Message to Sign	
5/28/2004	10:14:57 AM	Set of message 3.3	
5/28/2004	10:14:58 AM	Set of MultiString for message 3.3	
5/28/2004	10:14:59 AM	Set of message 3.3	
5/28/2004	10:15:00 AM	Set of message owner 3.3	
5/28/2004	10:15:01 AM	Verification of message 3.3 status (2)	
5/28/2004	10:15:04 AM	Set of message 3.3	
5/28/2004	10:15:04 AM	5902 PSC (5902 (PSC) Dickinson): Activate Message	
5/28/2004	10:15:14 AM	5902 PSC (5902 (PSC) Dickinson): Get Current Message	
5/28/2004	10:16:31 AM	5903 PSC (5903 (PSC) Dickinson): Send Message to Sign	

Tuesday, April 19, 2005 *Page 1 of 70*