



Documentation

PureRF RTU Guide

Version 3.x

OSSI

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Intelli-Site

Security Management Software

PureRF RTU Guide

PC Software RTU Interface Guide
For Windows 7 SP1, 2008 R2 SP1, XP SP3 & 2003 SP2

Version 3.x
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Table of Contents

Copyright	3
Trademarks	3
Table of Contents	3
Section 1 – Introduction	5
Overview	5
Technical Support Assistance	6
OSSI Headquarters.....	Error! Bookmark not defined.
Technical Support	Error! Bookmark not defined.
Section 2 – PureRF RTU Configuration	7
Adding a PureRF RTU to the Intelli-Site Tree.....	7
Add an RTU – Procedure	7
Import an RTU – Procedure	8
PureRF RTU Settings.....	10
RTU Node (Parent Node).....	10
Loops.....	13
Receivers	15
Controlling Relays	17
Section 3 – PureRF Driver Setup	24
Adding a PureRF Driver.....	24

Section 1 – Introduction

This section describes the following:

- Overview
- Technical Support Assistance

Overview

The PureRF RTU (Receiver/Transmitter Unit) is the Intelli-Site software representation of a PureRF RFID Management system. For purposes of this document, the term RTU is synonymous with a PureRF system.

The PureRF RTU is a General Protocol RTU that provides for user configuration of all aspects of the PureRF network, including:

- System Status – On/Off-Line
- Loop Status – On/Off-Line
- Receiver Status – On/Off-Line
- Relay Control – On/Off turn on/off the three relays attached to receivers.

Technical Support Assistance

OSSI Headquarters

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Technical Support


Technical support is available via Telephone, Fax or Email. Contact OSSI Technical Support 8:00 AM to 5:00 PM Central Standard time. If calling after hours, please leave a detailed voice mail message, and someone will return your call as soon as possible.

E-Mail: support@ossi-usa.com

Fax: 262-522-1872 (Attention Technical Support)

Local: 262-522-1870

When calling, please be at the computer prepared to provide the following information:

- Product version number, found by selecting the **About**  button from the Intelli-Site Menu Application Bar.
- Product serial number used for registration.
- The type of computer being used including, operating system, processor type, speed, amount of memory, type of display, etc.
- Exact wording of any messages that appear on the screen.
- What was occurring when the problem was detected?
- What steps have been taken to reproduce the problem?

Section 2 – PureRF RTU Configuration

This section describes the following Design Mode RTU activities in Intelli-Site.

- Adding a PureRF RTU to the Intelli-Site tree
- General Protocol RTU Configuration

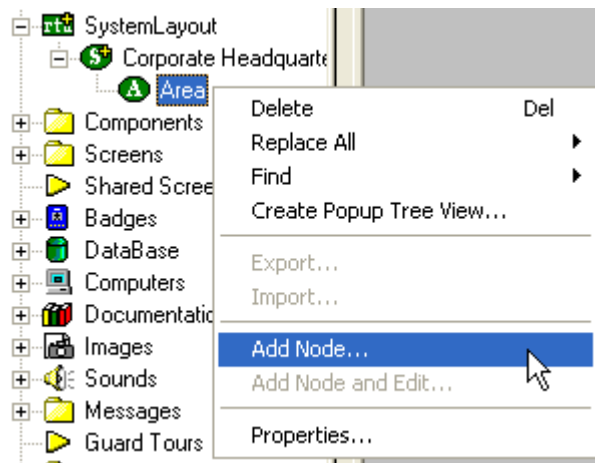
Adding a PureRF RTU to the Intelli-Site Tree



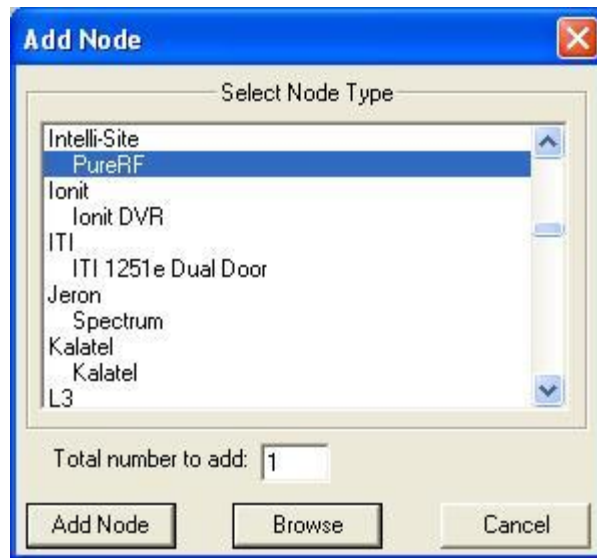
The following section will describe how to add one or more PureRF RTU nodes to the tree. All procedures described in this section are accomplished in Design Mode.

Add an RTU – Procedure

1. Expand the System Layout Node and Right-Click on an Area. Select **Add Node...** from the Shortcut Menu as shown below:



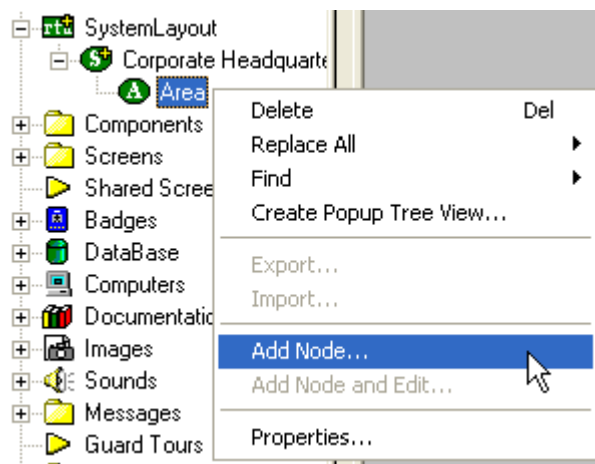
2. As mentioned previously, the PureRF RTU is of the Generic Protocol type. The default RTU includes 1 loop and 3 receivers. More can be added. Note: The total number of PureRF RTUs that may be added must not exceed 65535 for a given domain.



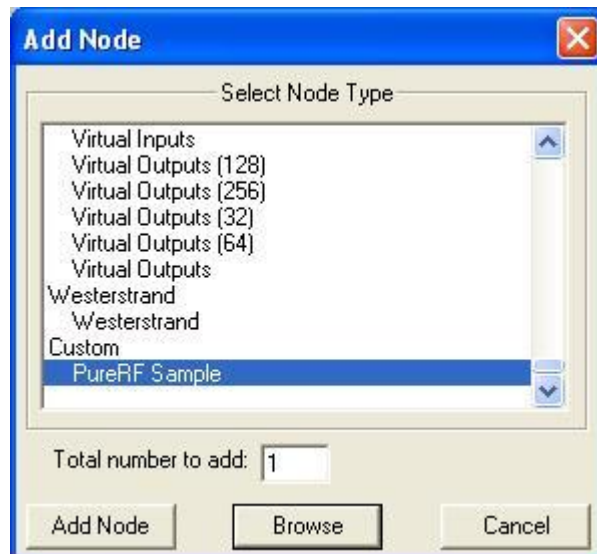
3. The RTU(s) will be added to the tree and the system level Text-To-Speech message "**Node Added**" will sound.

Import an RTU – Procedure

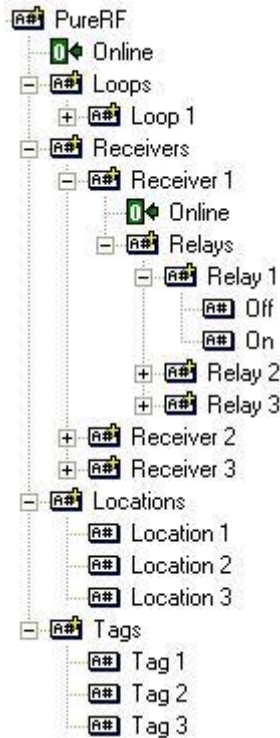
1. Expand the System Layout Node and Right-Click on an Area. Select **Add Node...** from the Shortcut Menu as shown below:



2. Select the **Browse** button on the **Add Node** dialog: A browse window will open. Browse to the appropriate location then select the RTU .exp file you wish to import and select the **Open** button. A new type (**Custom**) will be automatically added to the **Add Node** dialog and the imported .exp will be listed below the **Custom** type.



3. Select the imported RTU then enter the number of PureRF RTUs you wish to add to the tree in the **Total number to add:** edit box. You may add multiple RTUs to an area.
4. The RTU(s) will be added to the tree and the system level Text-To-Speech message **"Node Added"** will sound.



PureRF RTU Settings

The following section describes configuration of the PureRF RTU.

The PureRF RTU consists of a parent (the basic system node), the System Online I/O point, one Loop and three Receivers.

RTU Node (Parent Node)

The parent (PureRF) node is configured by **Right-Clicking** on the RTU and selecting **Properties...**

General Protocol Node Settings Tab

PureRF - Area PureRF

General Protocol Node Settings | Notes/Comments

Name: ID:

Access Level:

Domain:

Node Type: Driver:

Address:

Protocol:

RTU Setup

Virtual Virtual Point: Retain

Upload/Download

- 1. Name:** - enter a descriptive name for the system here. Example: RFID Management System.
- 2. Access Level:** - this is the Access Level of the node object (RTU).
- 3. Domain:** - the domain identifies the communications chain used for the PureRF system, i.e., an IP address and is tied to the domain setting on the PureRF driver in DriverService.exe.

Note: The Domain of a PureRF system will be unique for each PureRF system.

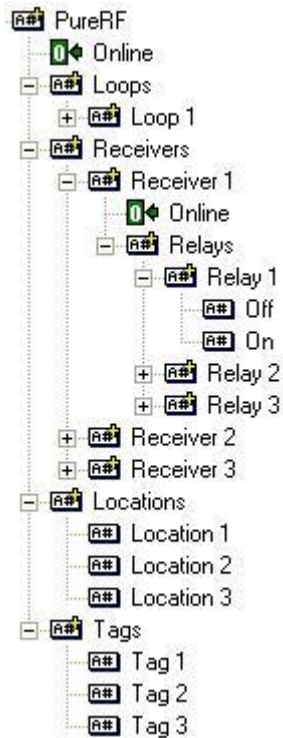
- 4. Node Type:** - This field will be "grayed-out" and should not change.

- 5. Driver:** – This combo-box field must be set to PureRF.
- 6. Address:** – Remains blank.
- 7. Protocol:** – Remains blank for this node.
- 8. RTU Setup:** - this area is used to configure the virtual state characteristics of the node.
 - a. Virtual Point:** - Check this box to “virtualize” the JPureRF system. When an RTU has been virtualized all server-to-driver services communications stop and will not be reinitiated until the RTU has been un-virtualized. Drag-and-drop a virtual I/O point into the drop field. This I/O point will be set high whenever the PureRF system is virtualized.
 - b. Retain:** - Reserved for future use and has no function at this time.

Notes/Comments Tab

This tab allows the programmer to enter descriptive text regarding the RTU (programmer’s notes). The programmer may enter any number of descriptive text lines (use CTRL+M to enter a new line).

The text entered on this tab may be printed in a special report: **Project Notes Report**. This is a useful tool for generating programmers’ comments as a part of the “as-built” system documentation.



Loops

The Loop “child” node is configured by expanding the **PureRF** folder and the **Loops** folder then **Right-Clicking** on the desired Loop and selecting **Properties...**

General Protocol Node Settings Tab

PureRF - Loops Loop 1

General Protocol Node Settings | Notes/Comments

Name: ID:

Access Level:

Domain:

Node Type:

Address:

Protocol:

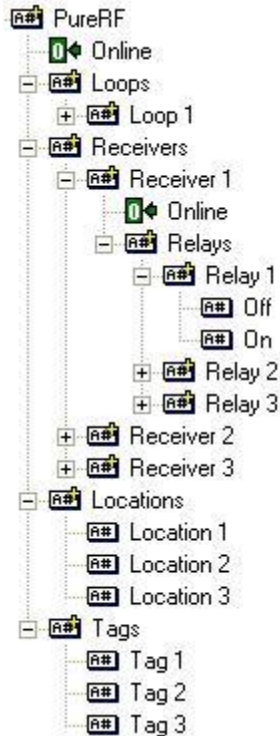
Ok Cancel

1. **Name:** - enter a descriptive name for the system here.
2. **Access Level:** – this is the Access Level of the node object (RTU).
3. **Domain:** – This entry is derived from the PureRF Node and is grayed-out (cannot be changed).

- 4. Node Type:** – This combo-box field must be set to General.
- 5. Address:** – This must be set to LoopID of the Loop in the RFIDLoop database table.
- 6. Protocol:** – This must be set to blank.

Notes/Comments Tab

This tab allows the programmer to enter descriptive text regarding the RTU (programmer's notes). The programmer may enter any number of descriptive text lines (use CTRL+M to enter a new line).



Receivers

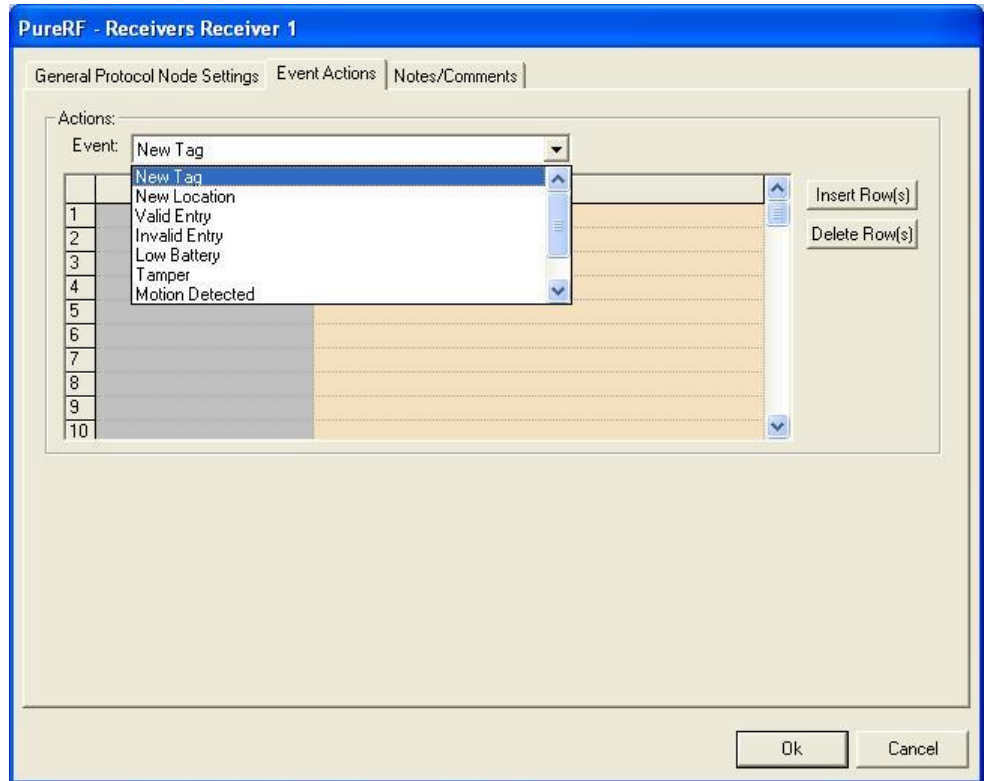
The Receiver “child” node is configured by expanding the **PureRF** folder and the **Receivers** folder then **Right-Clicking** on the desired Receiver and selecting **Properties...**

General Protocol Node Settings Tab

1. **Name:** - enter a descriptive name for the system here.
2. **Access Level:** – this is the Access Level of the node object (RTU).
3. **Domain:** – This entry is derived from the PureRF Node and is grayed-out (cannot be changed).
4. **Node Type:** – This combo-box field must be set to General.
5. **Address:** – This must be set to ReceiverID of the Receiver in the RFIReceiver database table.

6. Protocol: – This must be set to blank.

Event Actions Tab



This tag allows the programmer to configure server based actions for specific types of events at each receiver. The available events are:

1. New Tag – A new tag that did not previously exist was found at this receiver by the PureRF system.
2. New Location – A tag was found at a new location by the PureRF system.
3. Valid Entry – A tag was found at a new location that was a valid location for the tag.
4. Invalid Entry – A tag was found at a new location that was an invalid location for the tag.
5. Low Battery – A tag reported that its battery was low.

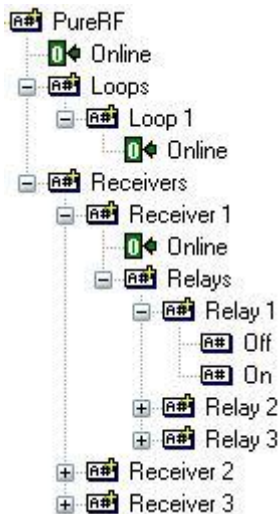
6. Tamper – A tag reported that it was tampered with.
7. Motion Detected – A tag reported that it was in motion.
8. Action Button – A tag reported that its action button was pressed.
9. Missing – A tag that was previously at this receiver is missing.

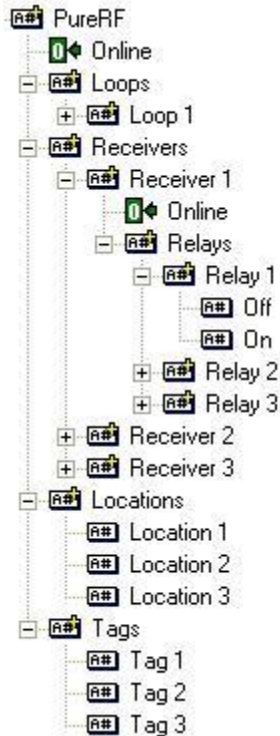
Notes/Comments Tab

This tab allows the programmer to enter descriptive text regarding the RTU (programmer’s notes). The programmer may enter any number of descriptive text lines (use CTRL+M to enter a new line).

Controlling Relays

The Relays “child” node of a Receiver contains commands that can be sent using the Actions grid. To control a relay you must use the “Send Command” Action under RTU in the Actions List, while your target will be either Off or On for the Relay you want to control.





Locations

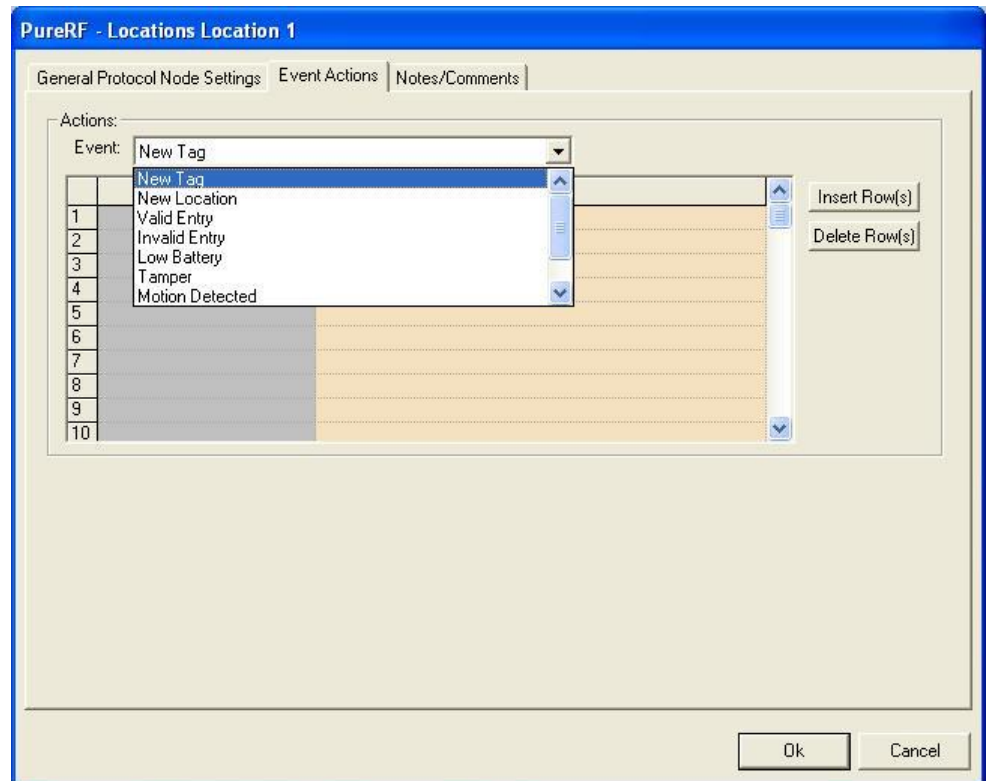
The Location “child” node is configured by expanding the **PureRF** folder and the **Locations** folder then **Right-Clicking** on the desired Loop and selecting **Properties...**

General Protocol Node Settings Tab

- 7. Name:** - enter a descriptive name for the system here.
- 8. Access Level:** – this is the Access Level of the node object (RTU).
- 9. Domain:** – This entry is derived from the PureRF Node and is grayed-out (cannot be changed).
- 10. Node Type:** – This combo-box field must be set to General.
- 11. Address:** – This must be set to LocationID of the Location in the RFIidLocation database table.

- 12. Protocol:** – This must be set to blank.

Event Actions Tab



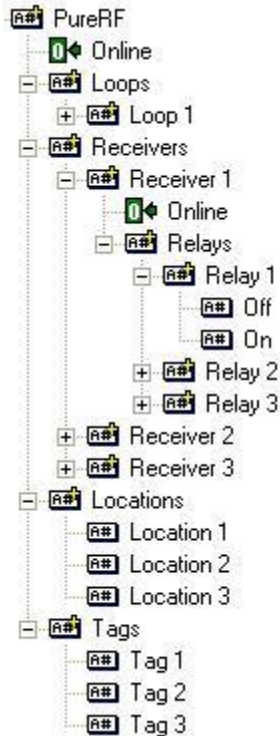
This tag allows the programmer to configure server based actions for specific types of events at each receiver. The available events are:

10. New Tag – A new tag that did not previously exist was found at this receiver by the PureRF system.
11. New Location – A tag was found at a new location by the PureRF system.
12. Valid Entry – A tag was found at a new location that was a valid location for the tag.
13. Invalid Entry – A tag was found at a new location that was an invalid location for the tag.
14. Low Battery – A tag reported that its battery was low.

15. Tamper – A tag reported that it was tampered with.
16. Motion Detected – A tag reported that it was in motion.
17. Action Button – A tag reported that its action button was pressed.
18. Missing – A tag that was previously at this receiver is missing.

Notes/Comments Tab

This tab allows the programmer to enter descriptive text regarding the RTU (programmer's notes). The programmer may enter any number of descriptive text lines (use CTRL+M to enter a new line).



Tags

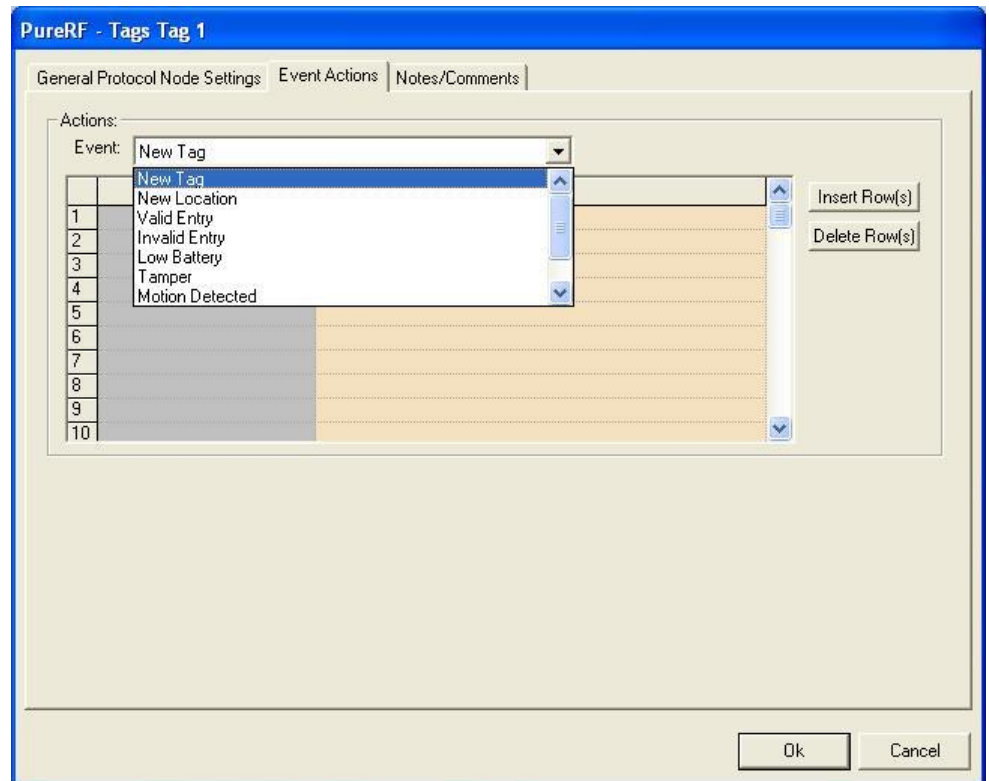
The Tag “child” node is configured by expanding the **PureRF** folder and the **Tags** folder then **Right-Clicking** on the desired Loop and selecting **Properties...**

General Protocol Node Settings Tab

13. **Name:** - enter a descriptive name for the system here.
14. **Access Level:** – this is the Access Level of the node object (RTU).
15. **Domain:** – This entry is derived from the PureRF Node and is grayed-out (cannot be changed).
16. **Node Type:** – This combo-box field must be set to General.
17. **Address:** – This must be set to TagID of the Tag in the RFIDTag database table.

- 18. Protocol:** – This must be set to blank.

Event Actions Tab



This tag allows the programmer to configure server based actions for specific types of events at each receiver. The available events are:

19. New Tag – A new tag that did not previously exist was found at this receiver by the PureRF system.
20. New Location – A tag was found at a new location by the PureRF system.
21. Valid Entry – A tag was found at a new location that was a valid location for the tag.
22. Invalid Entry – A tag was found at a new location that was an invalid location for the tag.
23. Low Battery – A tag reported that its battery was low.

24. Tamper – A tag reported that it was tampered with.
25. Motion Detected – A tag reported that it was in motion.
26. Action Button – A tag reported that its action button was pressed.
27. Missing – A tag that was previously at this receiver is missing.

Notes/Comments Tab

This tab allows the programmer to enter descriptive text regarding the RTU (programmer's notes). The programmer may enter any number of descriptive text lines (use CTRL+M to enter a new line).

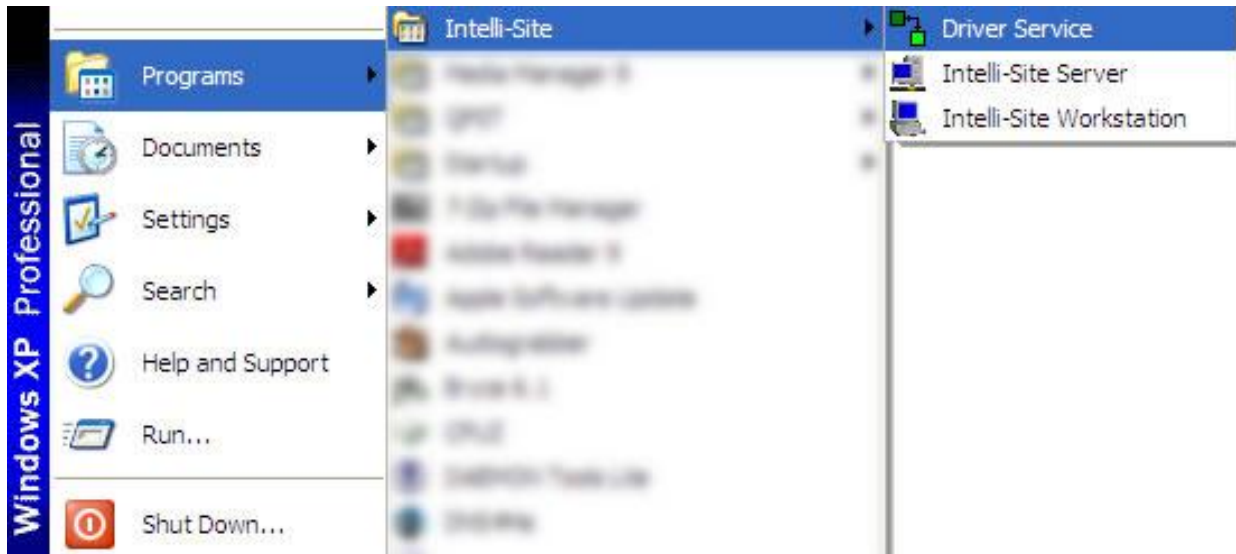
Section 3 – PureRF Driver Setup

This section describes how to properly setup and configure the PureRF driver in the Intelli-Site Driver Service.

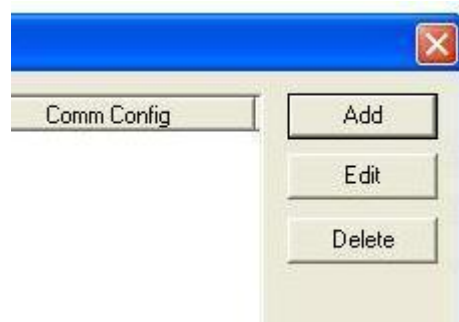
- Adding a PureRF Driver to Driver Service
- Configuring a PureRF Driver in Driver Service

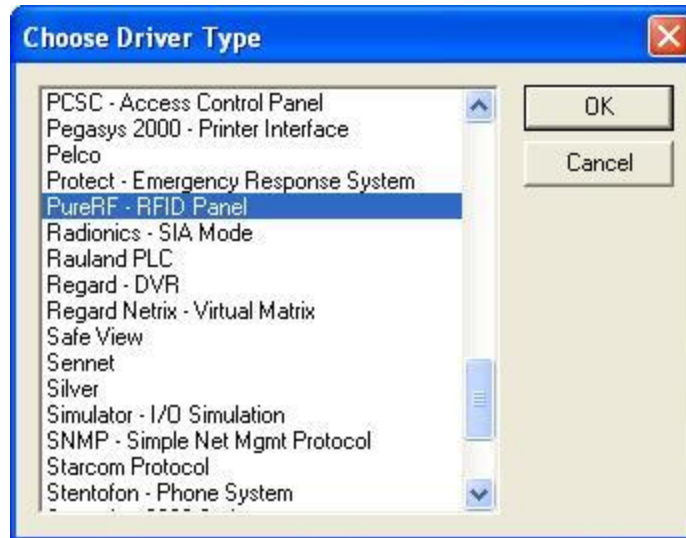
Adding a PureRF Driver

- Open the Driver Service window of Intelli-Site by double clicking on the icon in the system tray (if already running), or by selecting it from Programs on your Start Menu

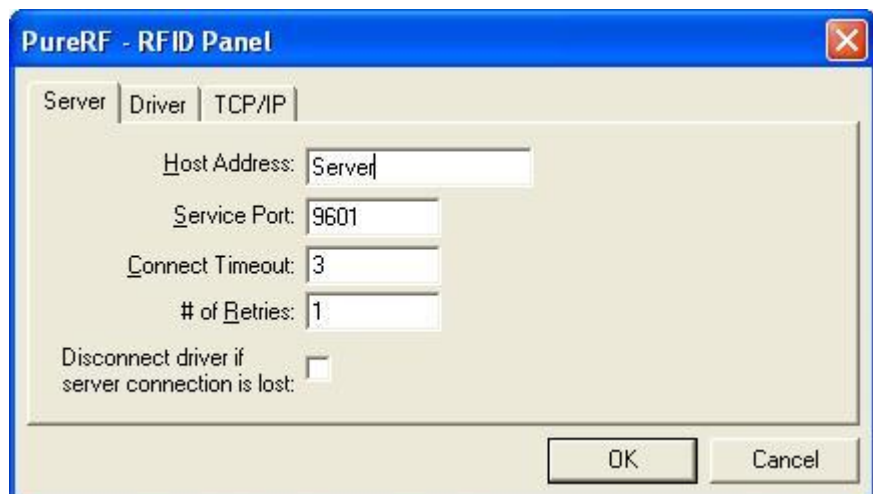


- Click on the "Add" button, in Driver Service, and select PureRF. Then click "OK"

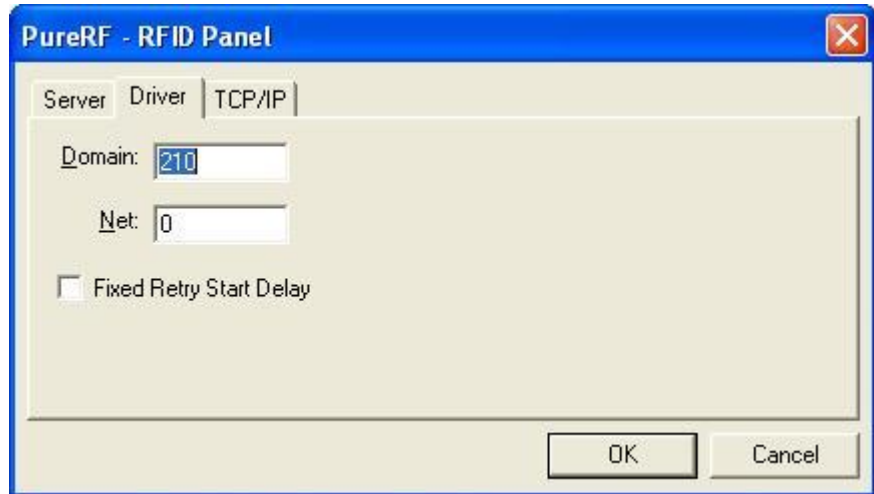




- Now you will see a smaller dialog window that consist of multiple tabs, beginning with the "Server" tab. In this tab you will see a "Host Name:" box, which should contain the name of the computer that is functioning as the Intelli-Site server. If you are running redundant servers, then your notation would look like this: "Server,Server2" (no spaces). For more details on generic driver setup, see the official Intelli-Site Reference Guide.



- The next tab is the "Driver" tab which contains the "Domain" and "Net" for most hardware, however the PureRF hardware only requires the use of a Domain. This value must match your RTU setup in the project and the driver will NOT come online unless this value is identical to your RTU's setup in Design Mode.



- The final tab that needs to be configured is the "TCP/IP" tab. This is where the user must input the correct IP address and TCP/IP port on which the Driver Service will communicate with the PureRF Service.

