ClearOne®

StreamNet™

STREAMNET-ENABLED DEVICES/ STARDRAW CONTROL INSTALLATION GUIDE

StreamNet-Enabled Devices/Stardraw Control Installation Guide

ClearOne Part No. DOC-0056-001 October 2012 (Rev. 1.0)

Table of Contents

AV Distribution and Control using StreamNet

StreamNet technology based products are designed to distribute audio, video and control data using standard networking technology. By embracing open standards, we have developed a system that leverages reliability, expandability and cost-effectiveness for customers.

Using standardized Ethernet TCP/IP protocols to distribute audio and video streams over LANs, StreamNet offers scalability enabling virtually unlimited zones and sources along with the most advanced integration capabilities available in distributed audio and video.

With StreamNet, seamless communication with other third-party systems, such as lighting control systems, automation systems and security systems is easily achieved. Some customers, however, choose to use the third-party system controllers or software to manage the entire system including StreamNet audio video distribution.
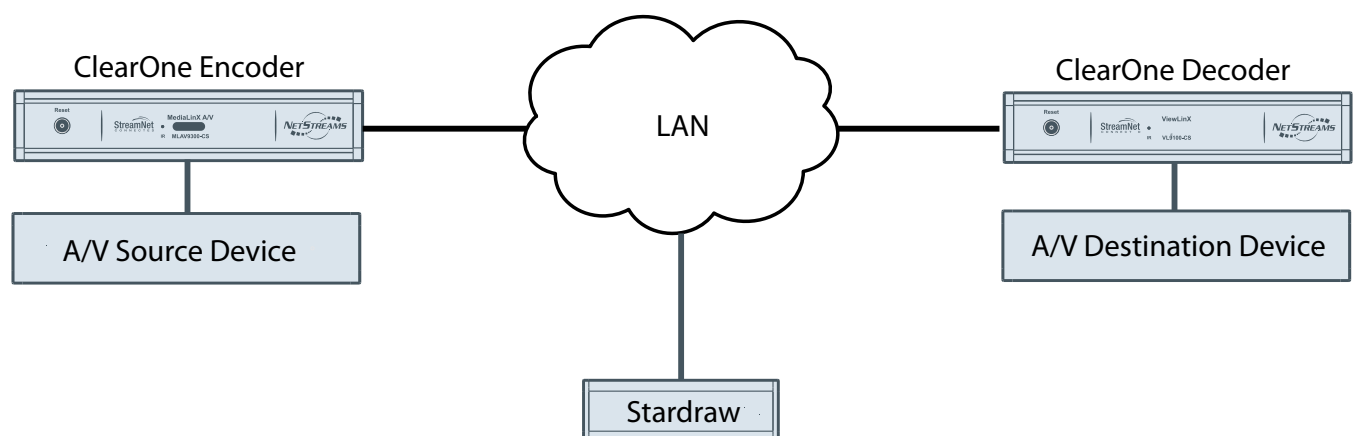
In order to assist Stardraw control software users, we have developed methods to setup the Stardraw Control 2010 software-based universal control platform with StreamNet systems. The Stardraw program used to create the StreamNet control interface can be run on a PC or laptop. It creates either an executable for windows based systems, or HTML for tablets, iPhones or iTouch systems operated through a browser. The control system generated is placed on a computer attached to the network (and equipped with a machine licensing dongle from Stardraw) to operate.

DISTRIBUTION MODEL WITH STREAMNET-ENABLED PRODUCTS

AV distribution using StreamNet-enabled products places the encoders and decoders at the individual sources and destinations. The encoders and decoders interface with the Ethernet network to move signals and commands to and from their destinations and sources.

- **Encoders** - placed at the AV sources to convert the source outputs, place the signals on the network and to receive their own commands from the IP network.

- **Decoders** - placed with the destination devices to receive and convert the signal data from source encoders and to receive their own commands from the IP network.

- **Stardraw Software** - The Stardraw Control 2010 software-based universal control platform provides the control needed for the use of the ClearOne StreamNet devices.

The GUI and the command processing programming that are essential to this control and communication are contained in Stardraw software running on a PC or laptop running on the same network.

SOFTWARE OVERVIEW

STARDRAW SOFTWARE

The Stardraw Control software must be obtained and licensed from the Stardraw website. It provides all the tools you need to design, develop, test and deploy sophisticated control applications. You will require two licenses: the Authoring License and the Machine License.

The Authoring License for Stardraw Control 2010 includes a USB dongle. You can install Stardraw Control 2010 on as many computers as you want and then just move the dongle around to use any of those machines - licensing for the authoring tool is based on concurrent users, not machine installations. For additional users you can purchase additional user licenses (i.e. extra dongles).

A Machine License includes a single dongle that enables that project. The Machine License dongle is connected to the server PC (usually at your client's premises) and manages the allowed number of clients – there is no security on the client machines; it's all done server-side.

> » Important Note: This guide will not give instruction for using the full capabilities of the Stardraw software. It will only give the basic instruction required to interface the Stardraw Control to the StreamNet network.

CLEARONE STREAMNET STARDRAW DEMO PROJECT

The ClearOne StreamNet Stardraw Demo Project is contained in the Stardraw Integration Module zip file that is obtained from the ClearOne website Resource Library under both the Enterprise Streaming tab (**http://www.clearone.com/resources#enterprise_streaming**) and the Residential Streaming tab (**http://www.clearone.com/resources#residential_streaming**).

This demo project is imported into a Stardraw project. It includes the Renderer (Zone) Controllers and drivers to give it the control of network resources within the StreamNet network. Once imported, it is edited to the specifics of the StreamNet implementation it is to control.

Stardraw Control only needs to know a single IP address, and through this one address can control the up to sixteen StreamNet output devices. Instead of IP addresses (which may change) the controller can address commands to friendly, human-readable names such as "Bedroom TV" or "DVD Player".

> » NOTE: To make the TCP connection, the controller must know the IP address of the device to which it is connecting. So at least one device in the StreamNet system must have a fixed IP address. It is best to dedicate a ControLinX device as the portal to the StreamNet system. The portal ControLinX can be assigned a static IP address but all of the other StreamNet devices can be allowed to find their own address.
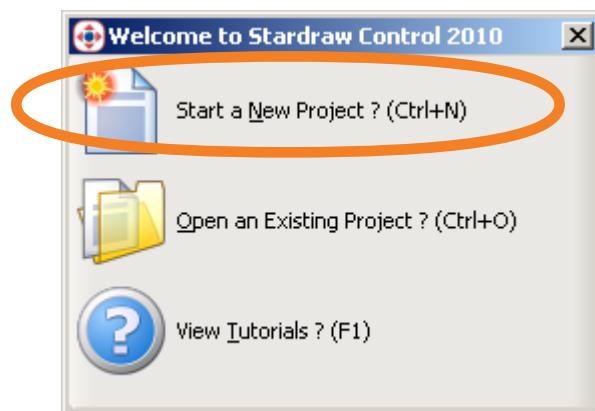
Implementation

The ClearOne StreamNet system is a networked Audio/Video streaming system. This makes it loosely defined as a switcher where the Audio/Video signals from a source "stream" to one or multiple destinations (Zone or Room).

To interface StreamNet to a Stardraw controller, the programmer must perform the following steps:
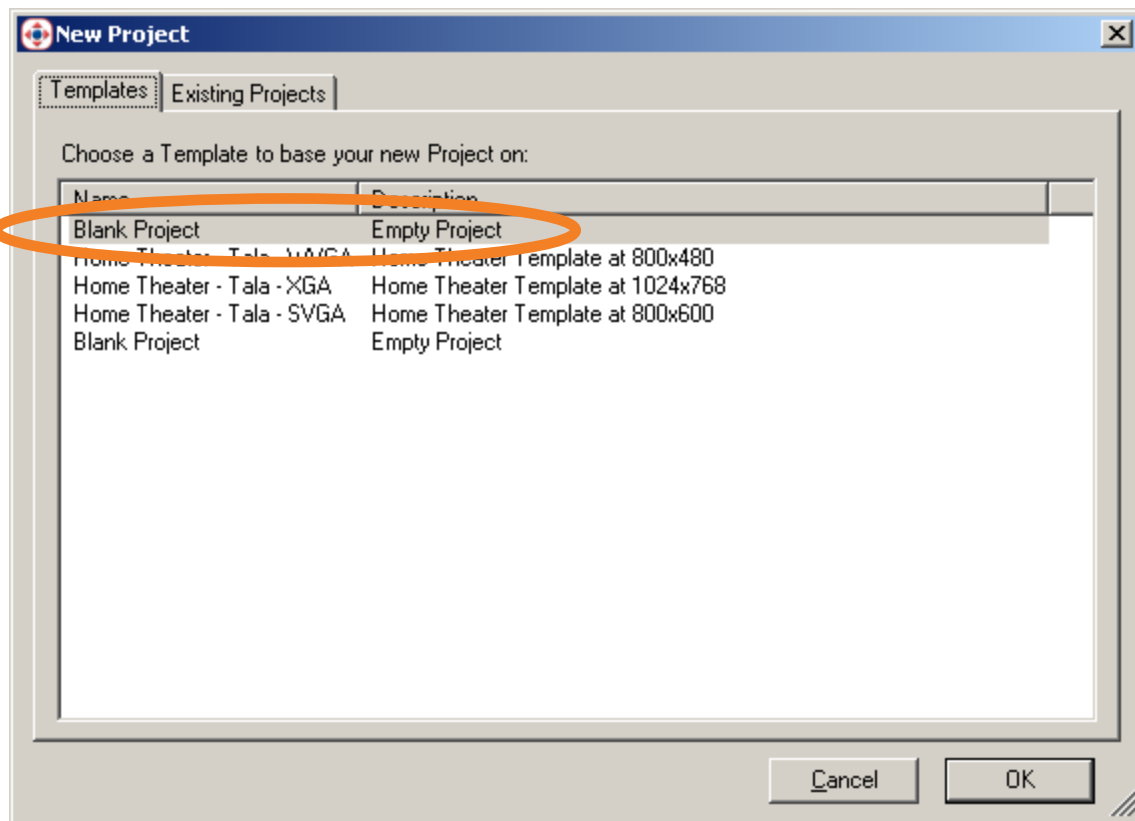
1. Obtain the Licensed Stardraw Controller software from Stardraw.

2. Install the Stardraw Controller software on the PC or laptop that is to become the Stardraw designer.

3. Start a New Stardraw Project

4. Import the "Clearone Streamnet Demo software into the Stardraw project. ("Clearone StreamNet Demo v1_0.apw")

5. Create and Define the ID's for StreamNet

6. Create the UI controls for the devices using the Stardraw application.

7. Complete and deploy the project

START A NEW PROJECT

After you have purchased, installed and launched the Stardraw Control software, you must launch and start a new project from the following:
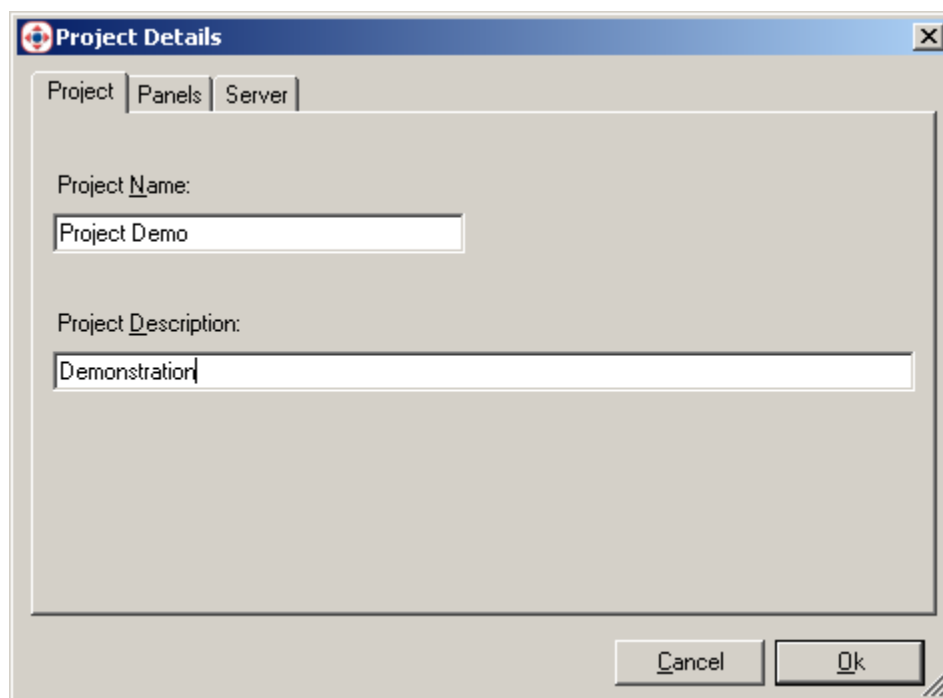

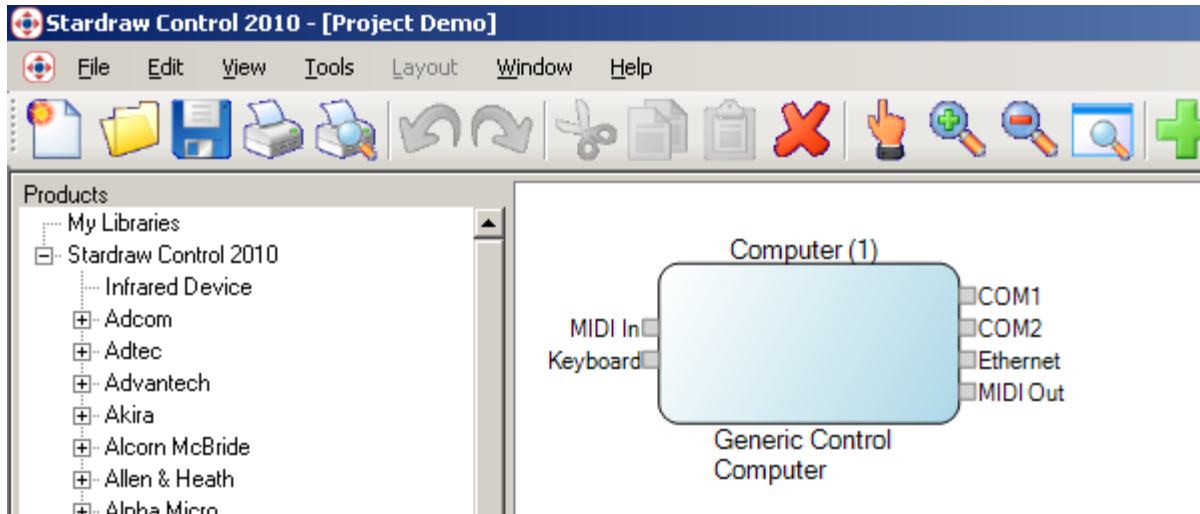You are presented a screen to choose a template for the project.

Select "**Blank Project**" and click "**OK**.

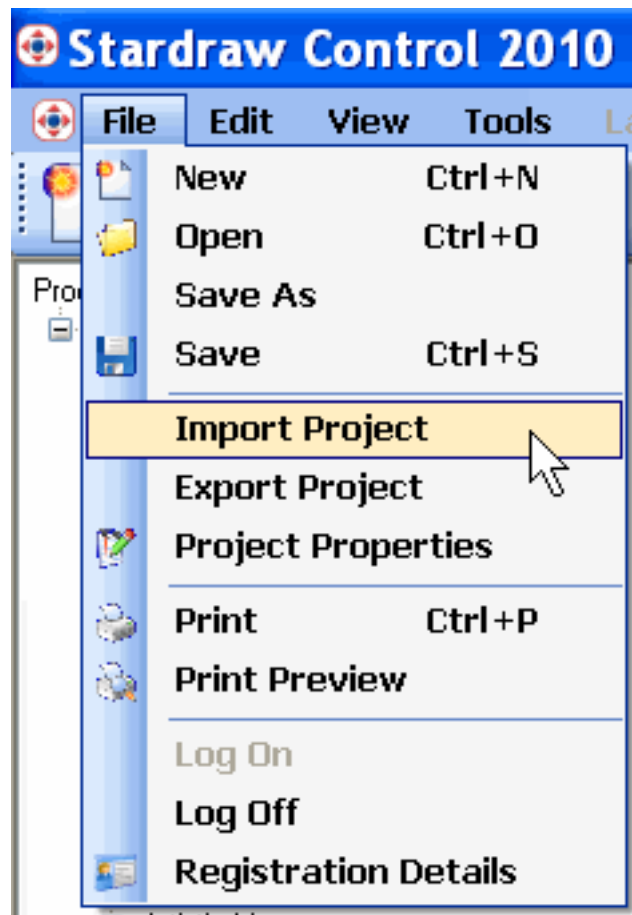Fill in the **Project Name** and **Project Description**.

After the application has loaded, you are presented the main screen showing a topology view with the Generic Control Computer element displayed. This project is not yet completed with the StreamNet information.
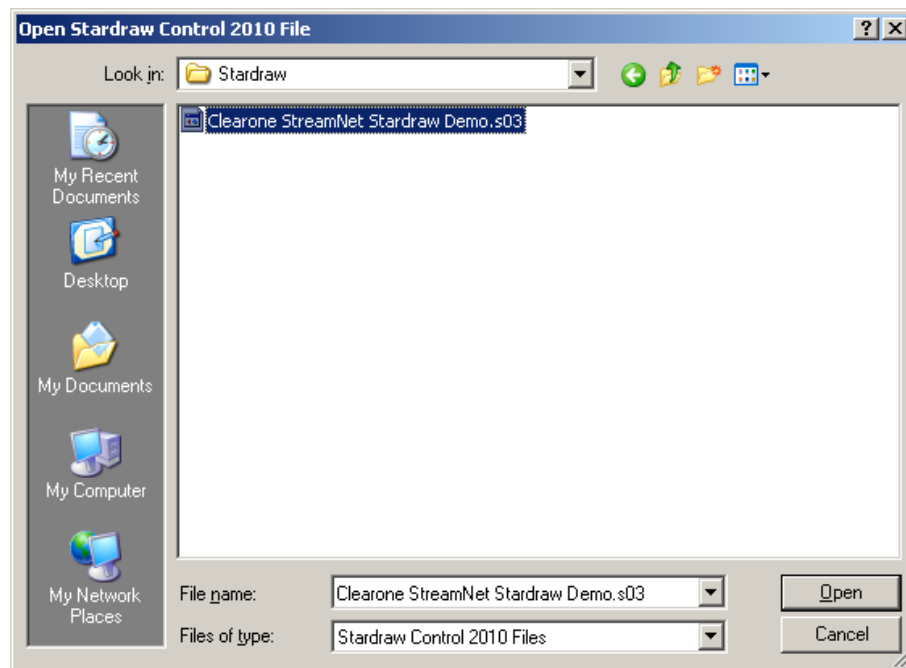

IMPORT THE CLEARONE STREAMNET DEMO SOFTWARE

The ClearOne StreamNet Demo software is imported into the current project from the main menu:
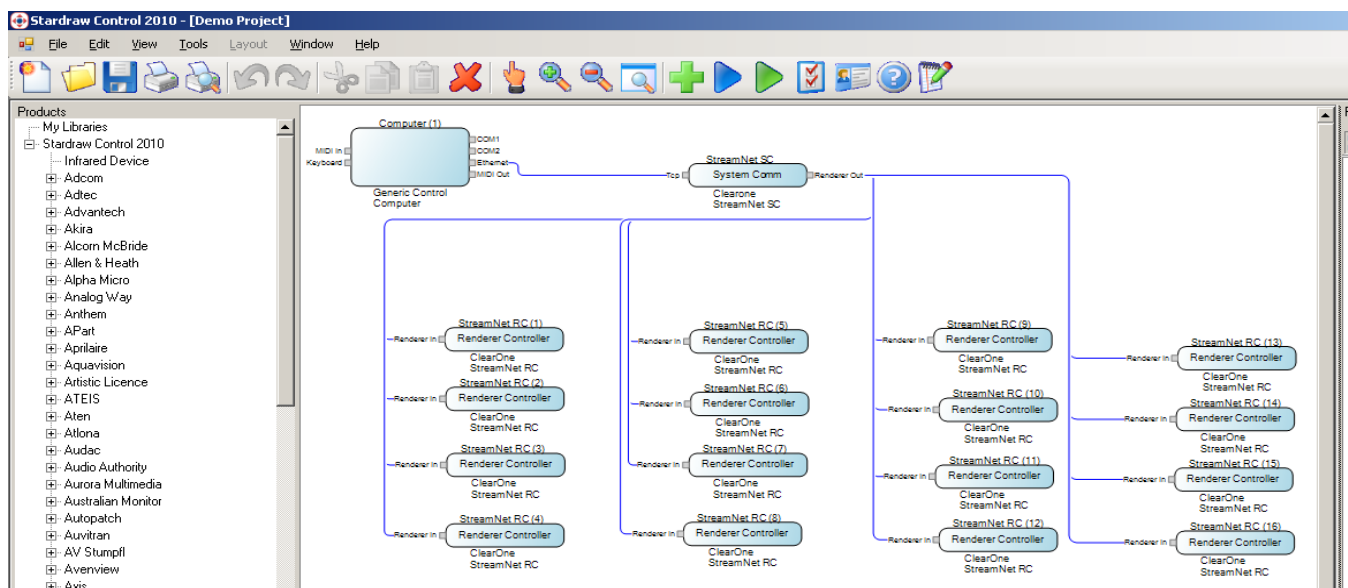
Navigate to and select the "**Clearone StreamNet Stardraw Demo**" file, then **Open** to import the demo software into the project.

Navigate to and select the "**Clearone StreamNet Stardraw Demo**" file, then **Open** to import the demo software into the project.

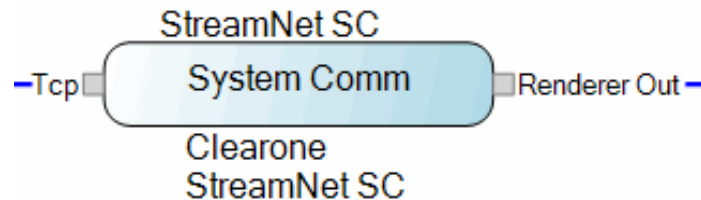The demo project is displayed on the topology view.
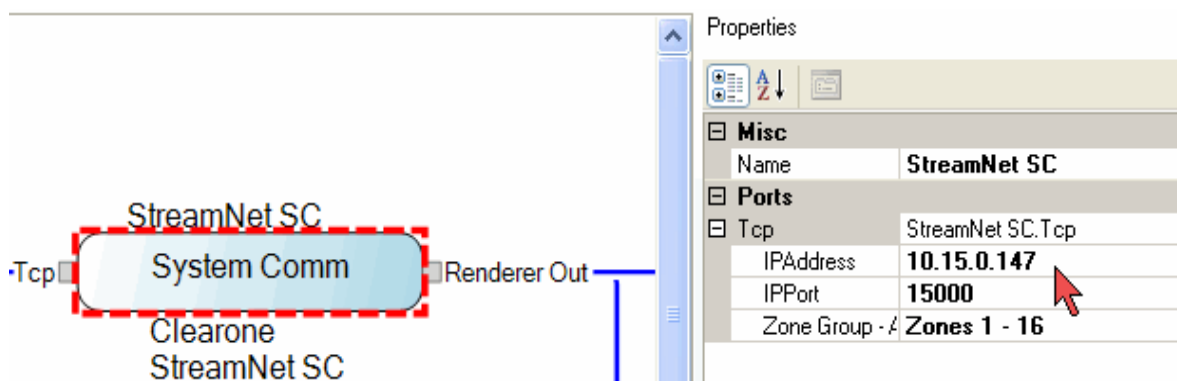
CREATE AND DEFINE THE ID'S FOR STREAMNET

The devices in the StreamNet network must be identified for use by the Stardraw controller.

SYSTEM COMM

The **System Comm** (SC) device is the gateway to the StreamNet system for Stardraw. It is shown as "StreamNet SC" in the topology view diagram. It is identified by its static IP Address, so It could be any SpeakerLinX, MediaLinX or ControLinX in the network.
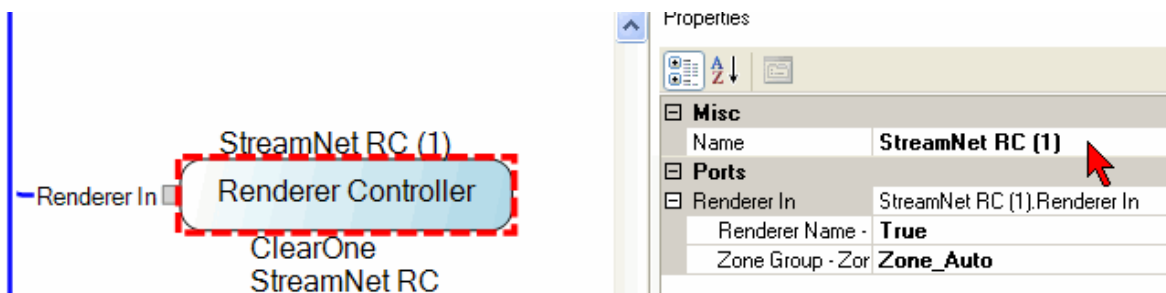
Select the **System Comm** with the mouse, then enter the **IPAddress** in the Properties panel at the right of the display.

RENDERER CONTROLLERS

There are sixteen (16) devices prefigured in the demo project, shown in the topology and named "**RC**" which stands for Renderer Controller. When configured, these can be any SpeakerLinX or ViewLinX. Each is essentially an output device.

Select each RC and enter its **Name** in the Properties area exactly as it is in StreamNet. You have to name each RC and they MUST exactly match the names as assigned in StreamNet Dealer Setup.
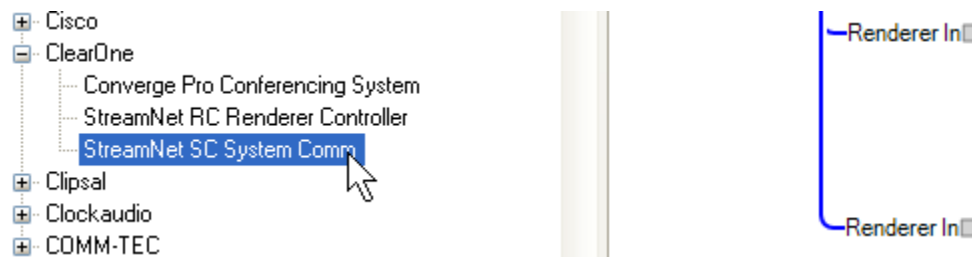
After the name has been entered it will be reflected in the topology view.

Continue the process until all RC's under the single SC are named. If there are fewer than sixteen RC's, the surplus can be deleted by selecting, then clicking on the **Delete** (red X) button.
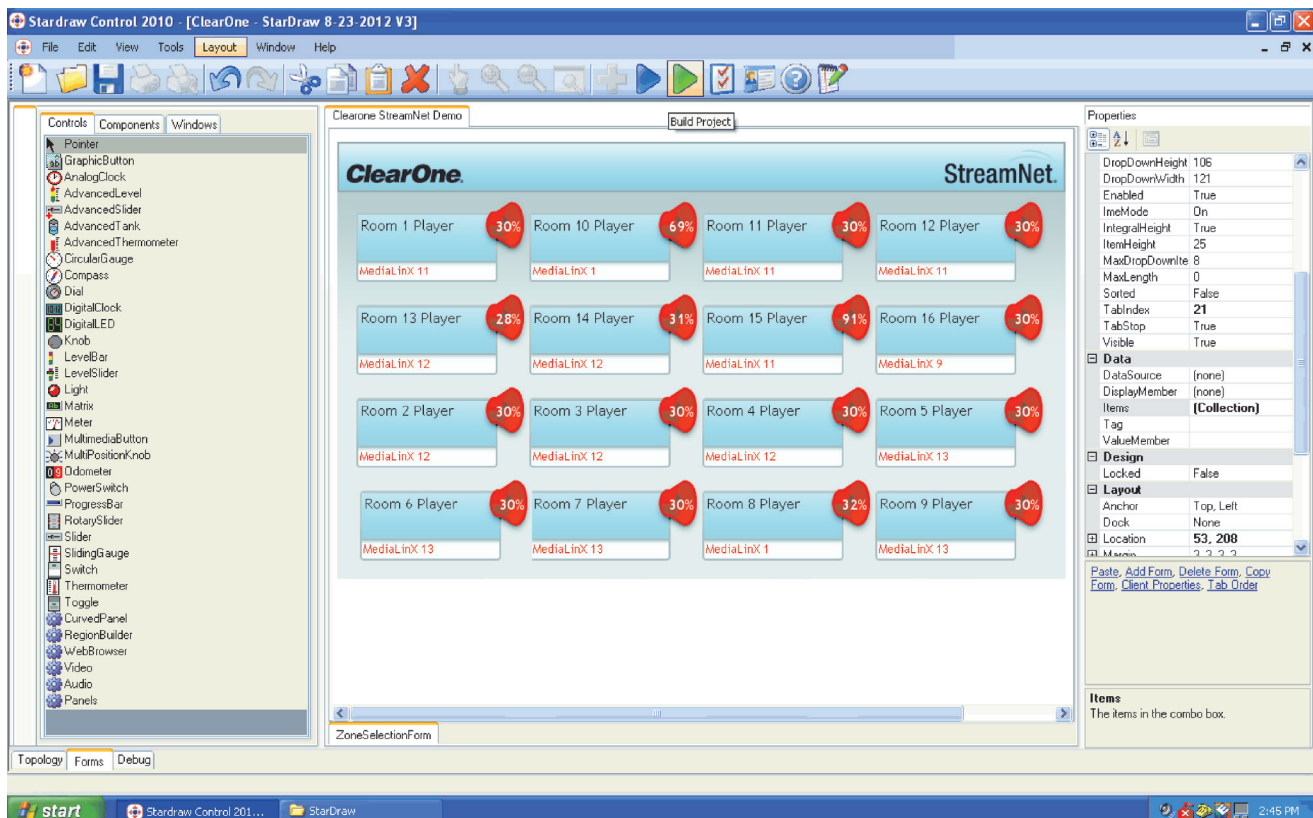
ADDING SC'S AND RC'S

If there are more than output devices in the StreamNet system, then an additional SC must be added and then RC's for those outputs under that. This is done by selecting the device from the ClearOne folder, and dragging it to the topology view.

Using the tools provided in Stardraw, make the needed connections between the SC and RC's to the topology view.

CREATE THE UI CONTROLS

Use the Stardraw application to create the user interface controls for the software controller. Instructions are in the Stardraw documentation located at **http://www.stardraw.com/products/stardrawcontrol/**. Below is a sample StreamNet GUI developed using Stardraw.

COMPLETE AND DEPLOY THE PROJECT

After the design is done, it can then be generated and deployed to the machine on which is intended to run.

Service and Support

If you need assistance setting up or operating your product, please contact us. We welcome your comments so we can continue to improve our products and better meet your needs.

TECHNICAL SUPPORT

Telephone: 1-800-283-5936

E-mail: tech.support@ClearOne.com

Web site: www.ClearOne.com, www.NetStreams.com

SALES

Telephone: 1-800-707-6994

E-mail: sales@ClearOne.com

TECHSALES

Telephone: 1-800-705-2103

E-mail: techsales@ClearOne.com

PRODUCT RETURNS

All product returns require a Return Material Authorization (RMA) number. Contact ClearOne Technical Support before returning your product. Make sure you return all the items and packing materials that originally shipped with your product.

StreamNet™
C O N N E C T E D

CLEARONE LOCATIONS

HEADQUARTERS:

Salt Lake City, UT USA
5225 Wiley Post Way
Suite 500
Salt Lake City, UT 84116

Tel: 801-975-7200
Toll Free: 800-945-7730
Sales: 800-707-6994
Fax: 801-977-0087
e-mail: sales@ClearOne.com

LATAM
Tel: 801-974-3621
e-mail: global@ClearOne.com

EMEA
Tel: 44 (0) 1189 036 053
e-mail: global@ClearOne.com

APAC
Tel: 801-303-3388
e-mail: global@ClearOne.com

TechSales
Tel: 800-705-2103
e-mail: techsales@ClearOne.com

Technical Support
Tel: 800-283-5936
e-mail: tech.support@ClearOne.com