

## Product Descriptions

### Synapse Voisus Server

Client-server based simulated radio and intercom voice communications solution includes:

**Target:** central communications platform, configured with Voisus Server

- **Voisus** is ASTi's client-server based audio-control distribution system
- Provides interfaces to multiple clients

**Voisus Client:** software clients compatible with Windows® or Linux™ computers

- Use a standard web browser to download Voisus Client software from the Target
- Features a simple GUI for accessing radios and intercoms; minimizes specialized training

**VBS2 Plugin:** standard feature, integrates ASTi radios inside the game.

For more information, see: [www.asti-usa.com/vbs2/index.html](http://www.asti-usa.com/vbs2/index.html)

**Comms Features:** ASTi intercoms for basic, clear communications and ASTi radios for interoperation with full-fidelity radio simulations, supporting: modulation types, propagation, ranging, single channel and MIL frequency hop modes, crypto systems, multiple compression types

**Various Configurations:** supports up to 40 Voisus Clients and 120 radios per Target

**Operator Ancillaries:** a selection of USB adapters, headsets and PTTs is available separately

### Synapse Workstation

Hardware-based simulated radio and intercom voice communications solution, includes:

**Target:** central communications platform, configured with Workstation software

**ACE:** ASTi's latest generation communications software suite

**ACENet:** Ethernet-based local audio and control network

**ACE-RIUs (Remote Interface Unit):** analog-digital signal distribution devices

- ACE-RIUs connect to the Target via ACENet over switched Ethernet infrastructure
- ACE-RIUs can be located thousands of feet from the Target
- Headsets, hand-held terminals and PTTs connect to the ACE-RIUs

**Hand-held terminals:** easy to use operator control and display devices

**Comms Features:** ASTi intercoms and ASTi radios, as described above for Voisus Server

**Supported Protocols:** DIS, VoIP, HLA (optional)

**Various Configurations:** including 4, 8, 12, and 16 operators

**Live Radio Remote Control Option:** hardware/software kit provides tuning and monitoring of remote live radios

**Operator Ancillaries:** a wide selection of headsets, PTTs, mics and speakers is available separately

### Synapse Radio Bridge

Live Radio Over IP system features:

**Target:** central communications platform, configured with Radio Bridge software

**ACE-RIUs:** as described for the Workstation

**RT Adapter Cables:** connect live radios to ACE-RIUs

**Maintenance Operator Station:** includes: hand-held terminal comms panel, headset and cable

**Comms Features:** ASTi Intercoms and ASTi radios, as described above for Voisus Server

**Various Configurations:** including 4, 8, 12 and 16 live radio interfaces

**For Use With:** PRC-148 (JTRS), PRC-119 (SINCGARS), PRC-117, PRC-113, URC-200, GRC-171 and others

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# Advanced Simulation Technology inc.



## Synapse Family

The Synapse family of products integrate live and simulated voice communications from an array of sources into a unified network. Synapse provides a balance of simplicity and flexibility to facilitate installation and management of communications for networked exercises. Features include:

- Ready to use: Pre-configured for deployment right out of the box
- Easy to install: Ethernet-based components, easily integrate into existing IP architectures
- Interoperable and powerful: All products feature ASTi's high-fidelity radio simulation environment.
- Scalable: Fits applications from small groups of operators to massive, distributed groups of sites
- Eases Information Assurance accreditation: uses Red Hat® Enterprise Linux®, the most certified OS available
- Built for high reliability and minimized life-cycle costs: includes industrial-grade hardware
- Centralized system management: networked configuration and equipment monitoring

### Synapse Voisus® Server

Voisus Server is ASTi's most economical comms system. It features ASTi Voisus technology, which distributes digital voice and controls between the central comms server and computer-based thin clients.

- Extend the power of the ASTi radio environment to customer-furnished Linux™ or Windows® PCs.
- Voisus Client: conserves CPU resources, maximizes reliability and minimizes maintenance (server-centralized software updates)
- Elegant administration: download client application from server, remotely configure comm plan, and operate
- Includes Virtual Battlespace 2 (VBS2™) plugin to integrate ASTi radios with the gaming environment

### Synapse Workstation

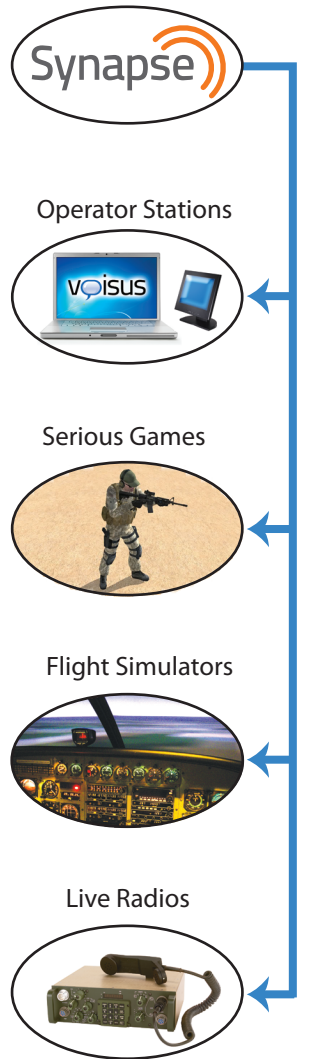
Workstation is a simulation and voice comms distribution system that features ready-to-use, hardware-based operator stations, including hand-held communication terminals.

- Perfect solution for situations requiring a 100% stand-alone voice comms system
- Compatible with a wide variety of ancillary options: headsets, speakers, mics and push-to-talks

### Synapse Radio Bridge

Radio Bridge links live radios to IP networks, providing a wealth of capabilities:

- Network repeater: extend live radio comms between sites through the data network
- Bridge inter-communications between disparate live radio systems
- Conserve live radio usage: networked operator stations share access to live radios
- Remotely control and monitor live radios over the IP network using web-based tools



## Remote Management System (RMS)

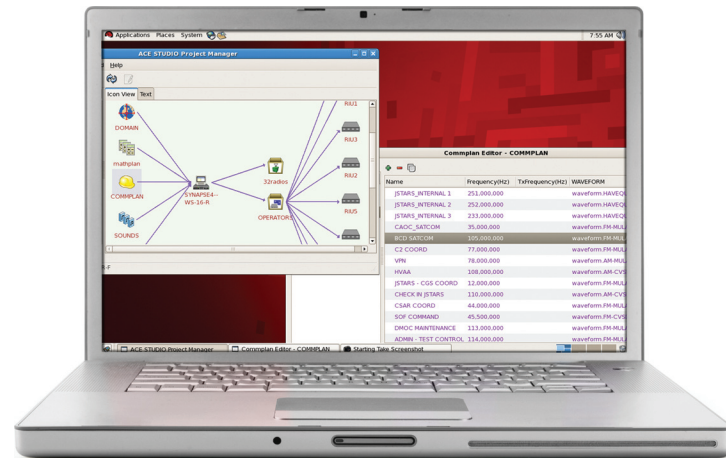
All ASTi Synapse systems feature powerful, network-based software tools that simplify exercise configuration and management.

ASTi's secure, web-based remote management services simplify communication system configuration and management. RMS is bundled inside every Synapse product, so you can remotely manage your ASTi communications system using a standard browser from any network location. RMS is easy to use: Even novice users can exploit the capabilities of ASTi's powerful and intuitive remote management services.

### Features

#### Automated Communications Planning

- Use the intuitive remote management tools to automate the generation and distribution of Synapse communications plans.
- Comm plans are software files that incorporate presets from exercise-level to individual operator-level.
- Share and distribute comm plans over the network.
- Synapse systems are software-definable; you can reconfigure an entire system by simply launching an archived comm plan.



#### System Management

- Manage all aspects of hardware and software components.
- Monitor system health and status.
- Configure ASTi communications network settings.
- Backup and restore system software files.
- Remotely reload, reboot and shutdown the system.
- Remotely control and monitor live radios (Radio Bridge option).

#### Communications Network Monitoring

- Network monitoring and simulated radio analysis tools are standard features.
- Monitor every aspect of the communications network from the highest network protocol levels to the finest details embedded in network packets.

### ASTi Synapse Installations

ASTi Synapse Voibus Servers, Workstations, and Radio Bridges are field-proven at numerous military and civil agency training and simulation sites across the U.S. and worldwide. To see the extensive list of installations go to:

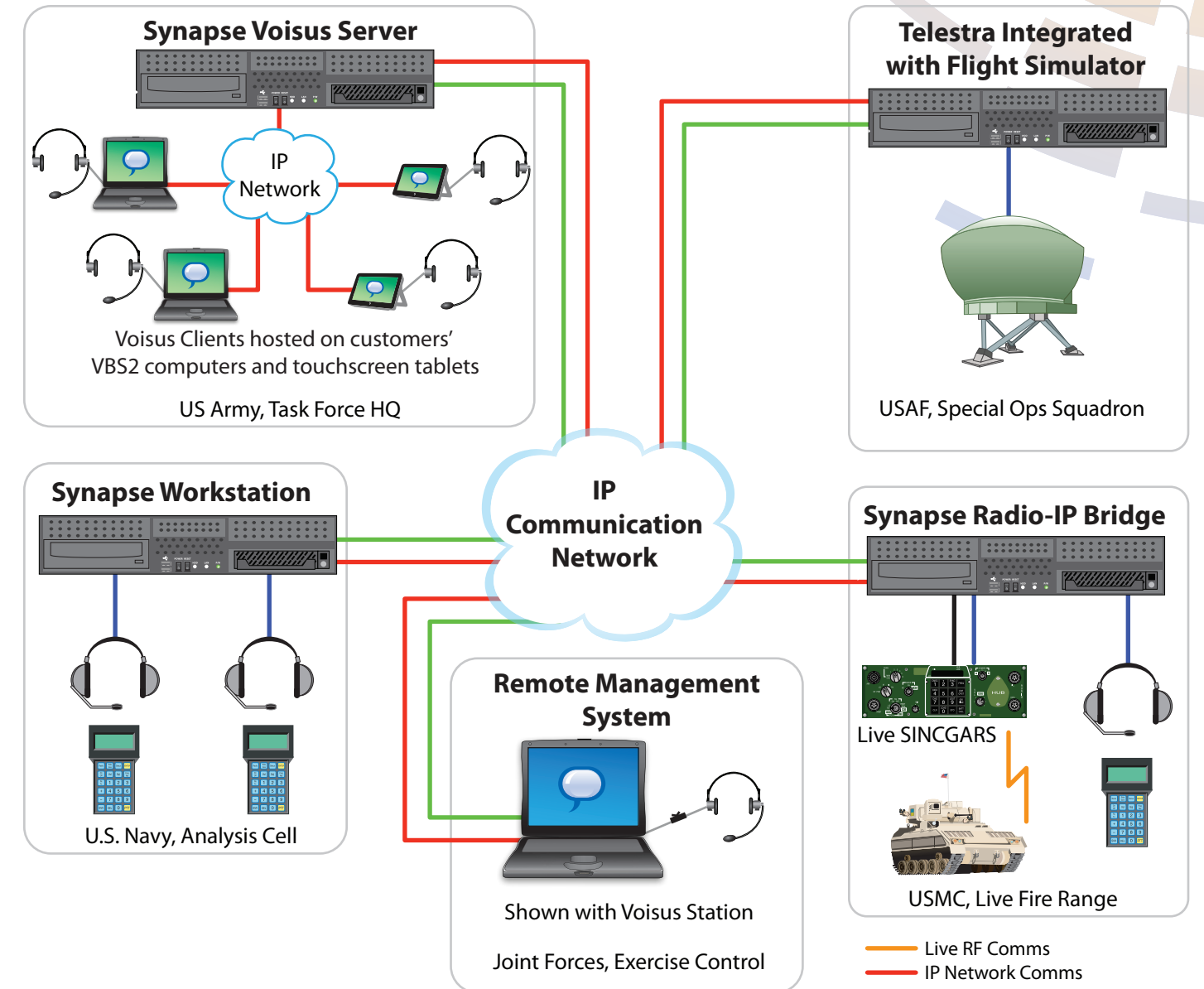
[www.asti-usa.com/synapse/install.html](http://www.asti-usa.com/synapse/install.html)

## Synapse Application: Live-Virtual-Constructive Training Exercise

**Challenges:** Link geographically-disperse training facilities, provide interoperability linking diverse environments (simulators, computers, serious games, live-field), and provide centralized exercise management

**Solution:**

- **Radio Bridge:** Links over-the-air comms from Live Fire Range to the IP network, provides remote radio control
- **Voibus Server:** ASTi radio comms capability on Task Force Center computers running VBS2
- **Workstation:** Operators in analysis cell use ASTi hand-held terminals to control their radio access
- **Telestra:** Integrates high-fidelity voice and tactical data link simulation into full flight sim
- **Remote Management:** Network-based tools to build and distribute comm plans, monitor system health, manage software, remotely control live radios



- Each Synapse product module can support multiple operators (as many as dozens per server node).
- ACENet network modules (Remote Interface Units) are now shown for clarity.