

REVIEWER'S GUIDE

PictureTel 900 Series Collaboration System

PRICE/AVAILABILITY:

Pricing for the PictureTel 900 Series ranges from \$9,500-\$29,500, depending on model and options. The PictureTel 900 Series can be ordered by calling (800) 716-6000.

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INTRODUCTION

The PictureTel 900 Series: visual collaboration, not videoconferencing

The PictureTel 900 Series is what every conference room in today's business environment needs: a natural way for people to interact and share information across distances with technology that *adds rather than subtracts* from the experience. The PictureTel 900 Series does exactly that. The 900 Series provides a natural, unintrusive method of communication in which people exchange not only visuals of themselves but share *all* of the information typically brought to meetings. PictureTel has dubbed this process “visual collaboration” because it lets people share the content of laptops, whiteboards, flip charts, Web sites, documents, spreadsheets, presentations—just about every type of information that can reside on a modern information device.

However, the PictureTel 900 Series collaboration system feels remarkably *un-video-conference-like*. Its easy-to-use, click-and-connect technology uses a simple icon-based user interface that makes it “easy to drive.” The system provides seamless access to information using traditional switched networks, Internet Protocol (IP) corporate networks and the internet itself. The business advantage is significant, as it gives workers full access to an organization's intellectual capital.

Partnering with Intel to produce a breakthrough architecture

While first-generation conferencing tools married the TV and telephone, the 900 Series brings together more technologies. At the heart of the system is an Intel-based Pentium PC that integrates data from virtually any PC-based data sharing tool including Microsoft® Word®, NetMeeting® and PowerPoint®. This architecture, which PictureTel and Intel have named iPower, combines PictureTel's audio and video capabilities and extensive experience in the collaboration market with Intel's expertise in developing open standards-based technologies that power many of today's PC, networking and communications products. The result is an architecture perfectly suited to run PictureTel's patent-pending People+Content™ technology, the application that drives the 900 Series.

The smoothest sharing of documents, presentations and data available today

Teleconference attendees know how frustrating it can sometimes be to share documents, files, presentations, and other forms of content. Often, quality is erratic. This is because traditional systems handle all information in one way, which may not yield optimal results for data coming from different devices. People and content must be handled differently. PictureTel's People+Content™ technology does exactly this, integrating heterogeneous input—from laptops, paper documents, Web content, whiteboards, etc.—with video of people in a way that alters the data compression to fit the type of information being transferred. The result is a seamless interactive experience. PictureTel is the first company in the industry to address the idea that people and content should be handled differently.

From both technological and usability standpoints, People+Content offers many advantages. For example, at a meeting where financial spreadsheets are being shared, these documents should be displayed at the highest possible resolution so that everyone can see them clearly—but *people* must be captured with a priority on capturing their *motion* smoothly. Traditional videoconferencing systems tune their resolutions to people only, thus compromising content from other sources. Traditional systems also take the technologically easier road of displaying either people or content, but not both. The 900 Series shows both with no compromise of quality.

People+Content accomplishes these goals:

- Distributes both content and people media streams appropriately
- Provides highest resolution to render content in a crisp, readable form
- Guarantees that content will reach all sites
- Allows users to easily connect the appropriate content source to the system

Natural communications: attendees interact ‘as if in the same room’

The PictureTel 900 Series audio technology makes natural conversation possible across any distance, while eliminating the audio fatigue that can result from continuous listening to sub-standard audio. This high quality is due to the system’s proprietary audio technology, Siren™ 14, a true 14 kHz audio that uses as little as 24 KBPS of bandwidth. (Regular telephone service is 3.5 KBPS, so you can imagine how clear and clean Siren 14 is.) Since Siren 14 delivers twice the audio clarity of other systems without diluting video quality, spoken ideas and thoughts flow smoothly and naturally over ISDN or IP networks. And, in the case of the higher-end 970 system, it is played on genuine Bose speakers.

In terms of video quality, the 900 Series is designed to sense and automatically allocate the highest possible frame rates and resolution to whatever is being shown, whether it’s people or content. No other system can match its sustained 30 frames per second video quality at 256 KBPS (even in full motion). On average, the document camera can deliver live, interactive content at twice the resolution of traditional videoconferencing systems. The 900’s higher quality audio and video gives attendees the feeling they are in the same room, helps ideas flow freer and yields greater benefits.

Two scalable models available today

The 900 Series product line includes the PictureTel 970 and 960. The 970 is the premier collaboration system, and includes: an Intel-based Pentium computer system, PowerMic, camera (with PictureTel’s patented automatic pointing technology), a wireless keyboard, remote control, and data connecting device called ImageShare™. The PictureTel 960 provides a baseline functionality which can be augmented over time, and includes: the Intel-based Pentium computer system, PowerMic, camera, wireless keyboard and remote control.

Budget-minded companies starting with an entry-level solution such as the 960 can easily enhance it over time with network cards, cameras, and other components. The 900 Series is fully scalable. An organization can build a solution that meets its unique business needs and budget with simple, a la carte components, or select from a bundled solution.

All of the 900 Series products are built on a standard, open platform that supports integration with Web accessible information, networked documents, PC-based whiteboard applications, and most other PC-based sharing tools. Organizations can always integrate their most important applications into their conference rooms and videoconference activities.

Easy to use



The 900 Series is intuitive and easy to use, with all functions controlled by either a remote control or a keyboard with a trackball. The remote control is the quickest way to accomplish the more common tasks such as muting microphones or moving the camera. For more complicated tasks, such as application sharing and entering text, the keyboard is used.

ImageShare™, PictureTel's tabletop connector device (below, right), is where data devices are plugged into the system. For example, to share a PowerPoint presentation, Word document or other PC-based file, you need only plug a laptop into ImageShare. The laptop transmits the content and it is displayed on a monitor or projector at the other end. Simply push the blue button on ImageShare, and whatever you bring up on your laptop is sent across the network in full native resolution. ImageShare enables the transmission of live interactive material at 1024x768 resolution. No one but PictureTel offers this.



Groundbreaking content and communications features

Some of the 900 Series notable features include:

Seeing the same content at both locations

While other systems let you transmit your content to the other site, they don't let you see what the other side is seeing. The 900 Series lets both sites see the same content. And since the 900 Series allows you to make content changes in real-time, changes are registered and seen immediately by all conference attendees.

Content previewing

This feature allows users to preview content before sharing it with other participants. Using a thumbnail view, users can see content as a small image on their screen before selecting it to share with the larger group.

Access to company directories

PictureTel supports networked corporate and personal dialing directories, so if you want to initiate a conference, you can simply find the participants in the company directory and double-click on their names. This feature is set up by the network administrator.

Network connectivity

The 900 Series ensures long-term investment protection, and complies with both ISDN and IP conferencing standards

International Versions

The PictureTel 900 Series supports English, French, Italian, Spanish, German, Portuguese, Chinese and Japanese language versions.

Sure Connect means fewer line disconnections

With the 900 Series, the chances of a call being dropped are virtually eliminated. The system's Sure Connect capability, working with PictureTel's patent-pending Network Optimizer, ensures that calls are connected the first time and that the connection and quality are maintained even under adverse network conditions. Users always experience high-quality video and audio even in spite of poor network performance.

Sure Connect automatically adapts to limitations, too. For instance, it can downspeed if a line is dropped during a call, negotiating channels when necessary, and adapting to lower data rates. The result is that conference attendees can focus on working together rather than on managing the technology or dealing with malfunctions.

Manage it from a Web browser

The 900 Series is great for network administrators. With its WebRemote technology, administrators can manage the system from any Web browser and SNMP platform (the system uses an industry standard Agent/MIB on SNMP management platforms). WebRemote allows administrators to control systems and conference activities through a standard browser interface, and can perform system management tasks such as configuration, administration, and troubleshooting. The system's management capabilities allow remote worldwide administration of systems, easy access to tools, quick resolution of problems, and higher end-user satisfaction.

One of the system's time-saving tools is the PictureTel Network Manager, a plug-in application for HP OpenView that gives administrators in-depth status and analysis metrics on system readiness and health. Call control, diagnostics, and statistics are all easy to get. Upgrades are always available from the network or Web using push and pull technologies.

When the 900 Series is not on-call, it is another node on the company's network, which can be used for local meetings and work teams who need to browse the Web or give presentations.

A QUICK TOUR FOR REVIEWERS

Welcome to the system demonstration! This short demo will highlight some of the features of the PictureTel 970. It assumes a “single monitor installation”—that is, one in which both the people and content will be viewed on one display rather than two. It also assumes that a PictureTel technician has installed and configured the 970 at your location. The following components should be in your conference or demo room—which we’ll call the “near end”—as well as at the “far end,” the location you will be teleconferencing with.

Components of the demo system:

- The 970 Series computer
- PowerMic
- Camera
- Wireless keyboard
- Remote control
- ImageShare™ device
- Utility cart

Before you begin

Please prepare for the demo as follows:

- If there are overly bright windows in the room, reduce the variable lighting by closing the blinds or shades.
- Place the PowerMic™ in a central position on the table in front of you and any other attendees. The ImageShare device should also be on the table before you.
- Plug your laptop (or desktop) computer into the ImageShare device using the cable provided by the technician. Have the far end site do the same. Bring up any Microsoft Word® document on the laptops at both locations. This is the content that will be shared.
- Be sure your system administrator has provided you with the phone number of the far end site.

Generally, either the remote control or the keyboard can be used for most tasks. However, you may find that the remote control is the quickest way to execute the more common tasks such as muting microphones or moving the camera. For more complicated actions, such as application sharing and entering text, you must use the keyboard. In this demo, we’ll use both.

When you are ready to begin, take a seat at your conference table, with the keyboard, PowerMic, and ImageShare device on the table before you. On the other side of the table should be the PictureTel utility cart containing the computer system and TV monitor. The 970 camera should be sitting on top of the monitor. (If a projector is being used, it can be connected to either the computer or the ImageShare device.)

Boot up and log on

Power up the system by switching it on from the computer box. The main system application will launch automatically and log you on as a default user. This may take a few minutes. The user interface screen, similar to the one pictured below, will appear on the monitor, displaying yourself and anyone in the room with you:



Please note on the user interface screen:

- “To call this system” text – displayed at the top-center of the screen, this shows both your ISDN number and LAN information. This information disappears when you begin a call.
- **People and Content** list – at the lower-left is the display box showing all sources of people and content available for the conference. During the conference you can click from this list to display whatever you want on the monitor.
- **Full Screen** button – on lower-left, puts the display into full screen mode.

Adjust the camera for an optimal view of yourself and your team

Before calling the other site, be sure your camera is pointed optimally at yourself and anyone with you.

To move the camera:

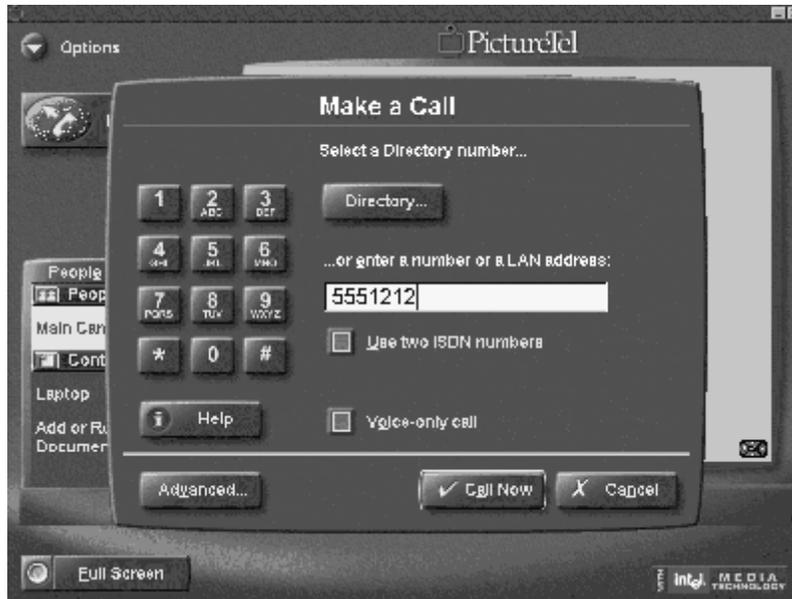
1. Use the arrow keys on the remote control to move the camera until it is at the best view. You and all attendees should be properly in frame (as in the graphic above).
2. Be sure that the far end site does the same.

Connect with the far end site

Once the camera angle is set up, you are ready to call the far end site. Normally, this is done by either dialing manually or using the system's Local, Central, or Personal Directory, by which the system can automatically dial the number for you. For this demo, we'll dial manually.

Using the remote control, press **Call Answer** .

The **Make a Call** dialog box appears on the display:



Type in the number of the far end site (for example, 19875554321), and click the  **Call Now** button on the display screen.

The number will be dialed.

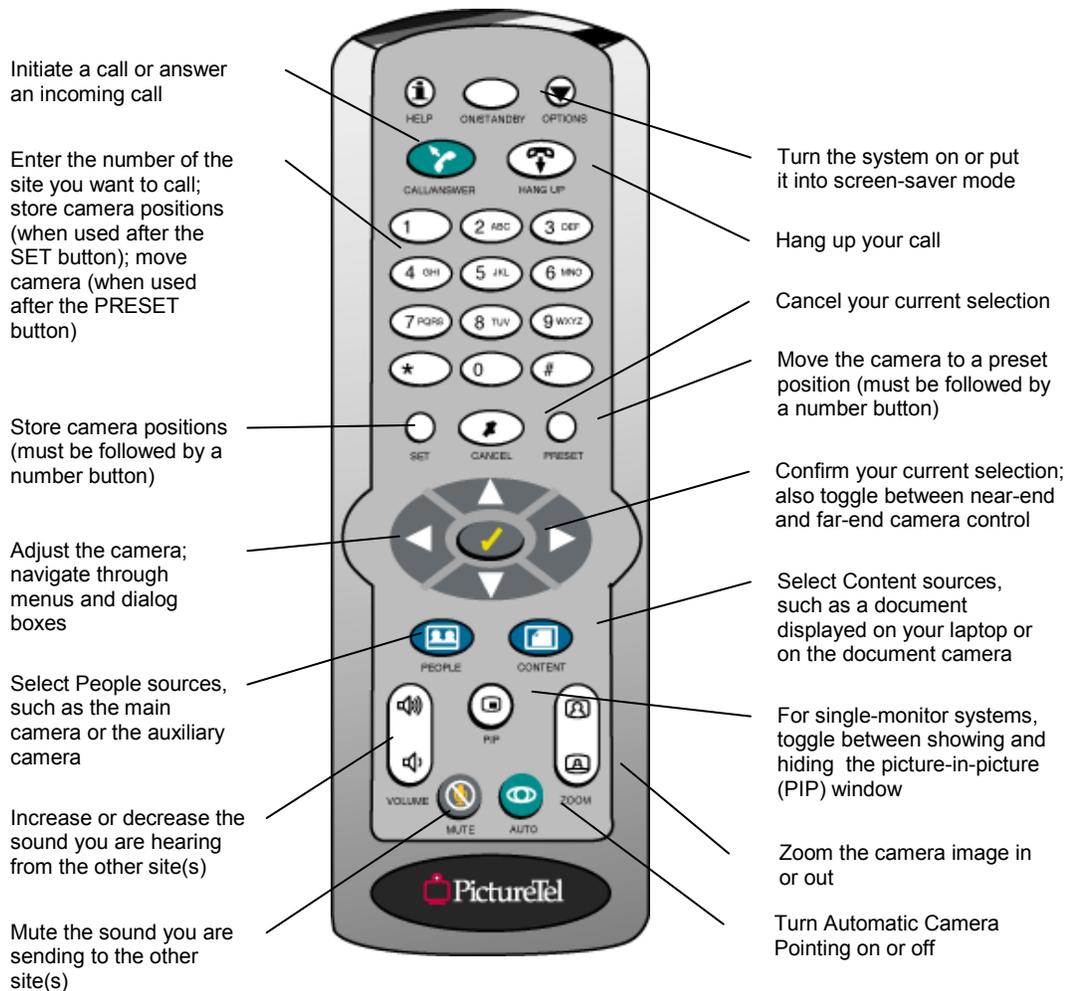
The far end site answers your call

Once the call is made, the far end site will hear their system ring. For this demo, the system should have been configured to Auto Answer, so it will connect automatically. If it is not, then the far end site must press **Call Answer**  on the remote control to answer.

Once the systems are connected, each site will be able to see the other's attendees onscreen.

A look at the remote control

Almost all of the system's features (except content sharing) can be accessed using the remote control. Take a moment to review the features of the remote control:



Getting help

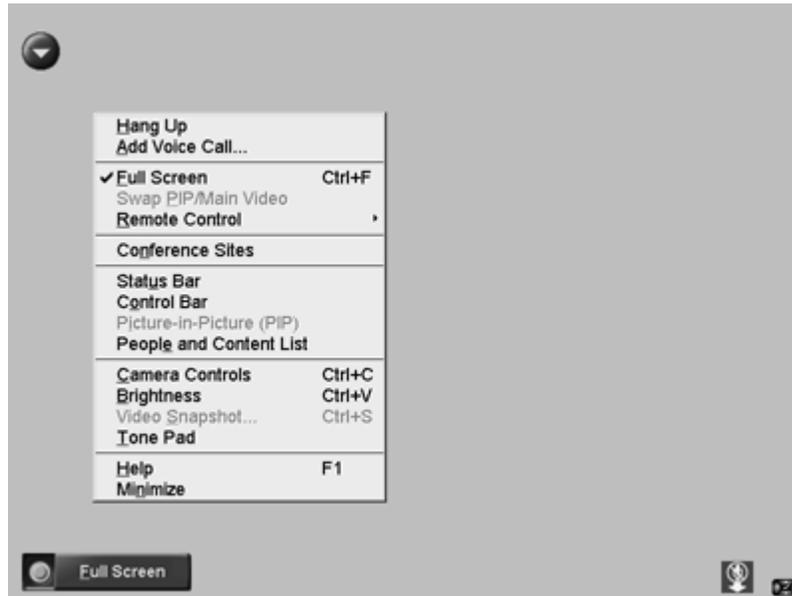
As any time during the demo you can press the **Help** button on the upper left-hand side of the remote control for online help.

Try this now.

The Options menu

Many of the system's features can be accessed via the onscreen Options Menu. To view this menu onscreen, click **Options** from the upper-right hand side of the remote control.

The options menu:



Try adjusting the brightness of the monitor by pressing Ctrl+V on the keyboard.

Observe the audio and video quality

The 970's superior audio and video quality are some of the greatest values of this system.

1. Spend a few moments viewing and conversing with attendees at the other site, noting how crisp the 14 kHz audio sounds.
2. Use the **Volume** button on the lower-left side of the remote control to increase or decrease the volume.
3. Have an attendee at the far end wave a hand back and forth, and note the near perfect visual quality of the moving hand. No other system on the market offers this level of resolution.

Have the camera isolate and follow people



Next, you'll use the Automatic Camera Pointing (ACP) mode which will isolate the camera (at right) on the person talking, even following them as they walk through the room.

1. Press the **Auto** button at the lower-right-hand side of the remote control. This is a toggle that turns ACP on and off.
2. Begin talking or have someone talk. Notice how the camera pans, tilts, and zooms smoothly and automatically to isolate on the speaker.
3. Have someone at the far end walk to various spots in the room while continuing to speak. Watch how the camera follows.
4. Arrange for several people at the far end to hold a conversation. Observe how smoothly the camera follows the action.
5. When you are finished using this feature, press the **Auto** button again. Use the **Arrow keys** and **Zoom** control on the remote to create a new shot. In a real-world application of the system, a “room shot” will have been saved on the system, to which you could have returned now.

Use People+Content to share content with the far end site

Here you’ll use People+Content, the system’s most innovative technology, to share information with the other site—in this case, the Word file on your laptop. The **People and Content** menu (below) should be on the lower left side of your monitor. To change from people to content, you need only click the appropriate choice.



1. Click on **Laptop**—or press the blue button on the ImageShare device. This will bring up exactly what is on the screen of your laptop for everyone to see. It will be shown in full screen mode. Note the quality.

Note that the document appears at both at your site and the far end site. Only the PictureTel 900 Series guarantees “single focus of content”—that is, both sites see exactly the same content.

2. See the small box showing the attendees at the other site? This is called the Picture in Picture (PIP) display.

The PictureTel 900 Series is unique in that it automatically switches from a people- to a content-appropriate compression. All other systems transmit information at the same rate, meaning that the resolution is often not optimal (compromising clarity for fluid motion, for example). The 900 Series offers both.

3. The PIP can be moved anywhere onscreen for convenience. To do this, use the trackball on the keyboard. Simply drag-and-drop it to a new location.
4. To remove the PIP from the screen, press the **PIP** button on the remote. You can toggle the PIP in out of view.

Use People+Content to view the content of the far end site

Now you'll view the content of the far end laptop.

1. Have the far end people press the blue button on their ImageShare device. Now both sites are looking at the content of the far end laptop. It's as simple as that.
2. Next, have one of the sites make a change to a document, and watch how it instantaneously appears on both displays.
3. You can always toggle between the content of each site's laptops. Do this by having the sites alternate pressing the blue button on their ImageShare devices, and watching the content onscreen change.
4. Before concluding the tour, disconnect your laptop from ImageShare, and note that "Laptop" is removed from the People and Content list on the screen.

Ending the Call

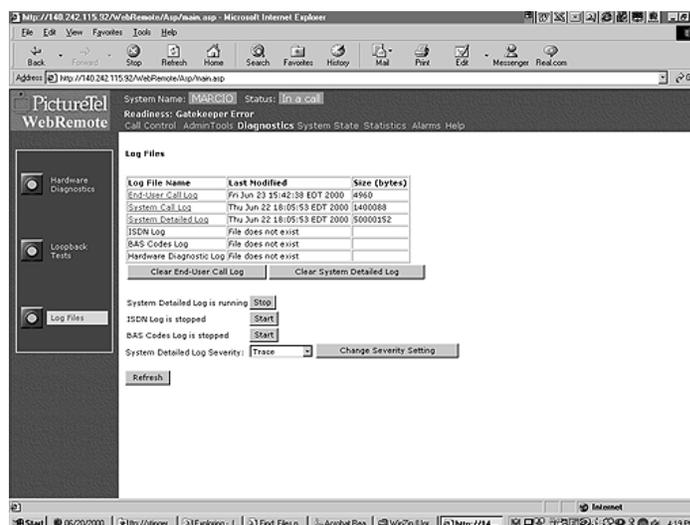
To end the call, press the **Hang Up** button on the remote control. The call will be disconnected.

Displaying information outside of a call

As a last exercise, do a mock in-room presentation by displaying your document on a full-screen image, outside of a call.

View the administration functions

Since the system hosts its own Web server, if another PC is connected to the LAN where the PictureTel 970 is connected, you can use the system's WebRemote functions. You can do this by opening a Web browser and typing in the IP address of the machine; it will automatically open the WebRemote application. WebRemote brings up a number of administrative features including ones that automatically can operate the system remotely. This is what it looks like:



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Appendix A

Models and Options

Currently, the PictureTel 900 Series includes two models: the **PictureTel 970** and the **PictureTel 960**.

PictureTel 970 – highest performance system

Includes:

- Intel-based Pentium III - 500 MHz or better
- PowerMic
- Camera with PictureTel's patented automatic camera positioning technology
- Wireless keyboard
- Remote control
- ImageShare™ - PictureTel's one-touch content sharing device

The PictureTel 960 – entry-level system (can be grown into a full 970)

Includes:

- Intel-based Pentium III - 500 MHz or better
- PowerMic
- Camera with PictureTel's patented automatic camera positioning technology
- Wireless keyboard
- Remote control

Individual Components (for both the 960 and 970 systems)

Displays:

- 29-inch or 34-inch NTSC/PAL monitor
- 29-inch or 34-inch XGA monitor
- XGA Projector

Carts:

- Premier Cart including integrated Bose speaker
- Utility Cart

Data Sharing Tools:

- ImageShare device – included in 970 system
- eBeam – a tool that transforms the typical white board into an electronic white board so that users on the far end can see what the near end is writing
- iBoard - An interactive white board that enables all sites to share and amend information displayed on a white board. This is the ultimate tool for brainstorming with dispersed work groups.
- Document Camera

Infrastructure solutions:

- Network Manager
- Directory Service Tools
- Document Server

Peripherals:

- Document cameras, whiteboards, display devices, carts, Lamps, microphones
- Support services

Other:

- Look-At-Me-Buttons (LAMBs)
- Extra PowerMics

Common Configurations

“Dual configuration” – Includes both the 34-inch monitor (for displaying people) and the XGA projector (for displaying content). This gives true “people and content” power.

“Single monitor configuration” – People and content are both displayed on the 34-inch NTSC/PAL monitor.

Single XGA projector configuration – displays all information on the projector.

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Appendix B

Key Users of the 900 Series

The PictureTel 900 Series is optimal for businesses, educational institutions, and nonprofit organizations that need to share information across distances.

Some examples of 900 Series users:

- Product management teams in all industries working with remote teams
- Consulting firms working with global organizations
- Ad agencies doing creative work with team members and clients
- Instructors doing distance learning
- Sales teams that need to communicate with geographically scattered teams
- Organizations concerned with Customer Relationship Management and Supply Chain Management
- Healthcare professionals who need to share diagnostic content with remote experts
- HR directors that need to hire and manage employ relations in a global organization

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Appendix C

Service and Maintenance Options

PictureTel offers a full range of services for the 900 Series line, covering evaluation, design, installation, management and education through maintenance and technical support.

Services offered include:

- Network evaluation and audit for video traffic over ISDN and IP networks
- Application design to meet specific customer needs
- Specialized solutions for vertical or horizontal markets, such as medical and education sectors
- Integration with third-party products to create a customer-specific solution
- Installation and project management to ensure operational readiness
- Education services to enable our customers to use our products with the highest level of confidence
- PictureTel maintenance services, which range from technical support, problem diagnosis, and software bug fixes and updates, to next day on-site labor and parts. PictureCare maintenance services are available in one-year and three-year packages at attractive prices. All of these offerings are available from PictureTel's reseller channels around the world.
- Management Services, for managing customers video environments remotely or on-site. This capability allows customers to focus on their core business while PictureTel manages their environment on a day-to-day basis, ensuring a successful customer experience.

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A Note about Resolution

The standard resolution supported in videoconferencing equipment is called CIF. This resolution (352 x 288) is well below the typical display resolutions used in modern laptops. Typical monitor resolutions are SVGA (800 x 600) and XGA (1024 x 768). As a result, in traditional videoconferencing systems, smaller fonts or fine graphics cannot be displayed legibly at the remote sites.

The PictureTel 900 Series corrects the content resolution problem. In order to provide legible content, much higher resolutions than CIF are needed. The PictureTel 900 Series provides direct encoding of VGA, SVGA, and XGA computer resolutions. This is done using the H.263 "custom picture format" facility. Using H.263 to encode XGA provides significantly faster display speeds than T.120 data-conferencing.

The PictureTel 900 Series also provides higher TV resolutions – full motion video at NTSC (704 x 480) and PAL (704 x 588). This provides the resolution of a still-frame graphic without the inconvenience of managing the "snapshot" button.

As a result of all of this, the remote sites can see what the local site sees, at the same quality and resolution.

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Appendix E
Compatibility

Software release EM20000524 of the PictureTel 970 system is compatible with these systems:

- PictureTel 760™
- Venue•2000™ 1.4
- Concorde•4500™ 6.50
- NetConference™ 2.0
- Portal 240™ 2.0
- LiveManager™ 4.0
- Montage™ 6.1

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Appendix F
About PictureTel

- Founded in 1984, PictureTel Corporation is the world leader in developing, manufacturing and marketing a full range of multimedia collaboration solutions.
- PictureTel also markets network conferencing servers and a comprehensive portfolio of enterprise-wide services.
- With global reach through the industry's most comprehensive network of sales channels, PictureTel has garnered approximately half of the worldwide video-conferencing market share.
- PictureTel is the only company capable of delivering complete visual-collaboration solutions, with products and services to meet customers' diverse needs.
- Headquartered in Andover, Mass, the company has offices in 14 U.S. cities, and international offices in the Americas (Brazil, Canada, Mexico), Europe (France, Germany, India, Italy, Spain, Sweden, Switzerland, The Netherlands, United Kingdom), Asia Pacific (China, Japan, Korea, Malaysia, Singapore), and Australia.

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