# Instant Two-Way Television

VBrick Video Network Appliances enable instant two-way television *with sub-second* call setup. The appliances automatically discover all of the VBricks in the network and display a unique *Conference Guide* on your TV monitor. A viewer simply points an IR remote control at their VBrick to select any available party and enjoy instant two-way television with CD-quality audio.

VBricks are uniquely identified by their IP address. In addition, a VBrick is also identified by a name, such as "Fred", "Roger", "Joe", and "Judy" (see figure 1). Periodically, each VBrick announces its name to the network. All of the VBricks in the network constantly listen for these announcements and they automatically build a real-time conference guide.

By pressing a button on your IR Remote Control, the Conference Guide is displayed and you can select any party. If there are more names than can be displayed on one page, VBrick automatically generates

multiple pages and the entries are listed alphabetically. A selection of any party automatically sets up a two-way television session.

Figure 1
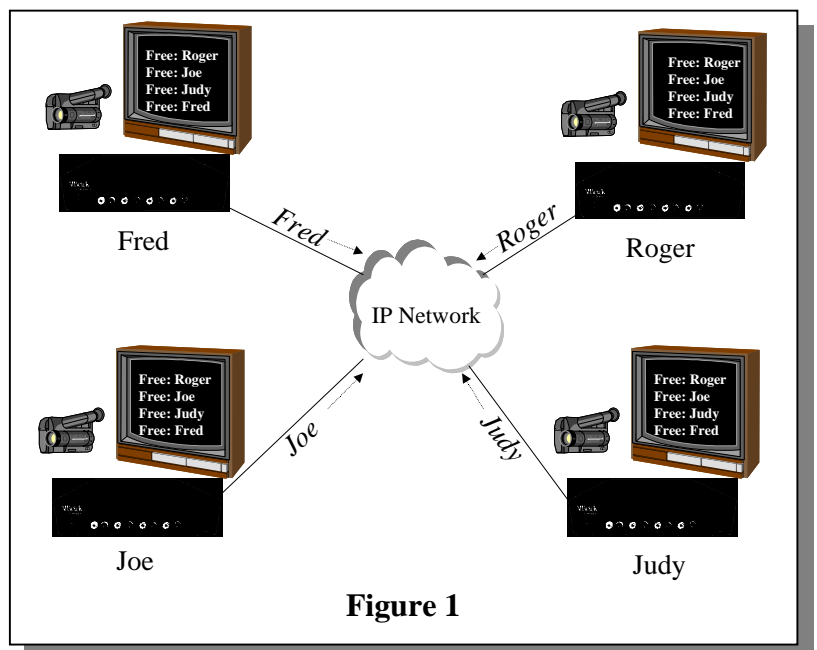
Let's say your name is Fred and you want to call Judy. You select Judy from the Conference Guide and your

VBrick contacts Judy's VBrick. If Judy has set her VBrick to autoanswer, you instantly have a two-way conference. If Judy is busy, you will know in advance because the Conference Guide tells you. But if you call her anyway, your name will flash on that Judy's screen letting her know you are calling. Judy can accept or reject your call. If she accepts your call you have instant two-way television. If Judy rejects your call, your screen flashes that your call has been rejected.

It is entirely possible that Judy set her VBrick to *autoanswer*, and when you connect she does not seem to notice your call! No problem -- simply press the "Ring" button on your Remote Control -- and Judy's VBrick "beeps", alerting her to your call.

Self-Organizing

The Instant Two-Way Television technology is fully distributed, self-organizing, and requires no central server for operation, administration, or support. Anyone with a VBrick connected to your network can see who is available for a conference and they can instantly connect for a two-way television session.

Security

While VBricks also can provide IP Multicast service, the two-way television sessions are established via unicast. This is inherently more secure than the managed broadcast provided by multicast and your video sessions are as secure as any other traffic on your network. In addition, only the two connected VBricks and the network "know" about the connection. There is no server involved and no record is kept of connectivity.

Administration

VBricks can be centrally administered via VBAdmin, SNMP, and other standard mechanisms. The VBrick configuration, including the "Conference Name", is stored in non-volatile memory in the VBrick. Except for setting the initial configuration or making changes, no administration is required.

Bandwidth Usage

VBricks operate in the 1 to 3 Mbps range. This is 10% to 30% of a 10BaseT, and is a load that is barely noticed by today's Ethernet switches and modern routers.

The announcements made by the VBrick are inconsequential, very small (only a few bytes), and can be configured to be sent every few seconds or after many minutes. The announcements can be sent throughout the enterprise network or kept just to a local subnet.

Quality of Service

VBrick is the first video appliance to support *DiffServ*, allowing the network to easily prioritize the video traffic and enabling QoS over IP.

Summary

VBricks maximize the use of your network and enable highly effective visual communications. Instant two-way television with VBricks are very easy to use, self-organizing, and are excellent network citizens.

Advantages

- *Sub-second call set-up*
- *Self-Organizing*
- *Fully Distributed, Server-less*
- *No PC required*
- *True Television Quality*
- *Extremely Simple and Easy to Use*
- *Inherently Secure*
- *Low Cost*