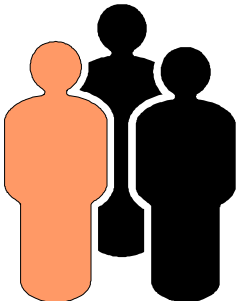


Videoconferencing & Firewalls

- Problem using H.323 and Firewalls
 - Some defined ports
 - 522
 - 1503
 - 1719 (Gatekeeper registration)
 - 1720 (H.323 Hostcall)
 - 1721
 - Dynamic negotiated ports for audio-/videostreams
 - UDP based
 - \approx 4 to 8 ports used per videoconference
 - Used port range > 1024 tcp/udp & < 65535 tcp/udp
 - Firewall can handle defined ports
 - Firewall won't handle dynamic negotiated ports
 - Scenario 1: Setup not succesfull \rightarrow complete conference failed
 - Scenario 2: Setup succesfull, conferncepartner can see/hear you, you have a black screen
 - Scenario 2 typically, normaly traffic inside \rightarrow outside is not restricted, but traffic outside \rightarrow inside is restricted



\rightarrow PROBLEM IS MANAGEABLE: SEE NEXT SLIDE

Videoconferencing & Firewalls

- Solution
 - Using Gatekeeper/Proxy combination used by the RZG
 - Advantages
 - No costs, GnuGK is OpenSource
 - Get your own GnuGK with your own zone and zone-prefix
 - GnuGK works with all vc-systems like ViaVideo, Tandberg, Sony as well as software vc-systems like Netmeeting (Windows) or Gnomemeeting (Linux)
 - Proxy for all your audio-/videostreams → vc-traffic (signal messages/mediastreams) “runs” over the proxy
 - All vc-systems connected to this GnuGK are behind the firewall
 - GnuGK offers a wide range of authentication methods, prefix-auth, IP-auth, mysql-auth, LDAP-auth,...
 - Minimization of used port range is possible (T.120 ports, RTP ports, H.245 ports)
 - RZG experience
 - GnuGK used successfully with **all** RZG vc-devices (Garching & Greifswald)
 - Used with 8 Tandberg systems, 1 Sony (testsystem), 17 ViaVideos, tested with several Netmeeting and Gnomemeeting clients
 - Used with DFN MCU, max. conference up to 16 participants, max. bandwidth used with DFN MCU up to 2 MBit/s
 - Max. bandwidth up to 3 Mbit/s (P2P)
 - Tested with Tandbergs DuoVideo
 - Tested with T.120
 - Since August 02 used for more than 600 confernces (includes testcalls)
 - Acceptance: good – very good
 - Performance: good – very good

