

Voyager and Voyager-Enabled AG Resources

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Goals of the Voyager Project

- Keep scientific records
- Support asynchronous collaboration

Standalone Voyager Concepts

- Flexible, extensible client-server architecture
- Currently records and plays back audio, video and vr tracking streams
- Creates sessions that are bounded by time
- Stores data so you don't have to

Voyager in the Context of the AG System

- Model of an external service
 - The AG can operate without Voyager
 - Voyager adds value to the AG
- Sessions are bounded by space
- Sessions may not be bounded by time

AG Voyager Playlist



Voyager Session Playlist

List of sessions recorded on
venues.accessgrid.org

[379] Full Sail Venue@venues.accessgrid.org on 11/7/00 12:46 PM

Hitting the Play button will launch the playback window for the selected session

Play

AG Voyager Session Playback



Voyager Session Playback

Venue: Screening Room
Audio: 233.2.171.35/41000 Video: 233.2.171.34/41002

[379] Full Sail Venue@venues.accessgrid.org on 11/7/00 12:46 PM
37 streams

| User | Encoding | Duration | Size (KB) | Avg BW | NTP | Play | ssrc |
|-----------------------|--------------|----------|-----------|--------|-------------------------------------|-------------------------------------|----------|
| root@140.221.10.149 | H261 (video) | 20:56 | 6,378.90 | 40.61 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a093617 |
| root@140.221.152.160 | H261 (video) | 20:55 | 99,027.56 | 630.91 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0a2928 |
| ag@131.94.133.48 | H261 (video) | 19:38 | 33,231.65 | 225.53 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0a3d49 |
| ag@140.221.140.195 | H261 (video) | 20:31 | 82,696.87 | 537.20 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0a937f |
| ag@140.221.140.195 | H261 (video) | 20:35 | 99,742.14 | 645.64 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0abcd0 |
| agtech@131.193.77.102 | H261 (video) | 20:49 | 16,660.57 | 106.66 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0abf4d |
| root@140.221.152.160 | H261 (video) | 20:33 | 87,185.88 | 565.47 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0c08f9 |
| root@140.221.152.160 | H261 (video) | 20:43 | 84,599.26 | 544.21 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0c6318 |
| access@205.253.57.119 | H261 (video) | 20:47 | 60,419.63 | 387.46 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0c6744 |
| agnode@141.142.214.8 | H261 (video) | 20:47 | 29,254.29 | 187.66 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0c8639 |
| root@140.221.10.149 | H261 (video) | 20:39 | 7,824.07 | 50.51 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3a0cbdde |

Start Stop Quit

Ongoing Work



Archive more of the AG System

Recording the space

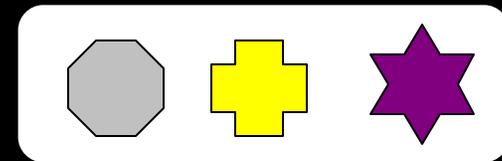
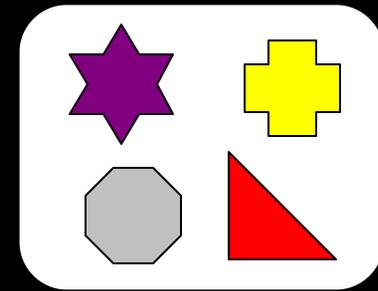
- Documents
- Events
- Applications
- Interaction threads

Archive more of the AG System

AG Metadata

"Node Views"

- Layout and movement of objects on the AG display
- Event sequence



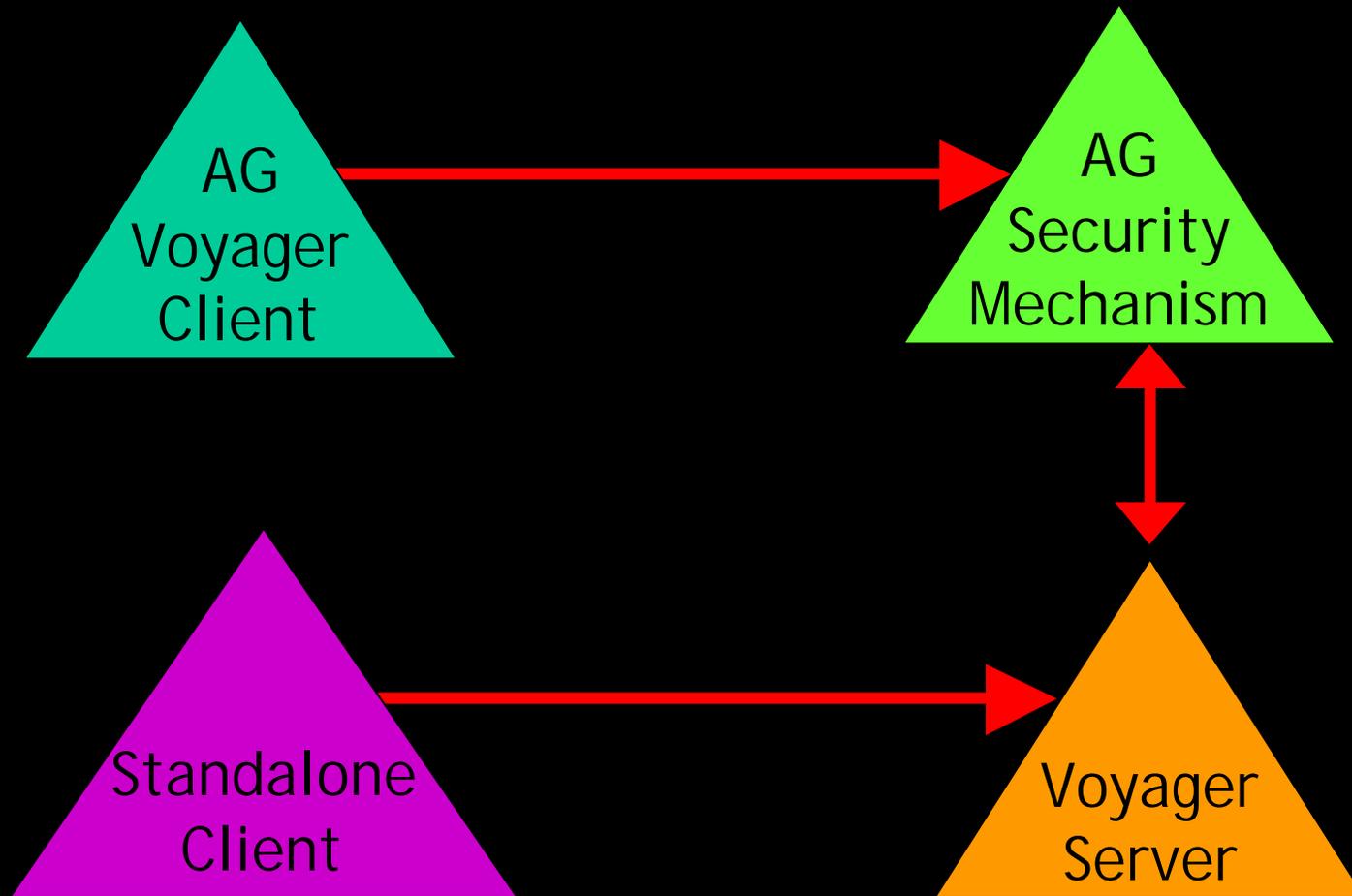
Archive more of the AG System

Voyager Metadata

- Session metrics
 - Network stats
 - Disk performance
 - CPU utilization

Security

Component Authentication Model



Security

Session Access Model

- Who has access rights on a shared session?
 - Users specify the access policy at session creation time
 - Each session will have a “door” with its own ACL

Security

Two Models

for Recording and Playing Encrypted Data

- When recording is initiated, server is provided with a key to decrypt the data
 - Store data encrypted or unencrypted
 - Relying on security of the voyager server
- Server transports and stores data without knowledge of content
 - Can free server from responsibility of securing the key
 - How to play encrypted data?
 - Time synchronization

Navigation within a Session

- Smart Marks
- FF, Reverse, Pause
- Temporal Compression
- Slow Motion
- Directly manipulating the archive's Event Sequence

Multi-Session Management

- Transporting sessions between servers
 - Content-based collections
 - Distributed sessions
- Interface with multiple servers
 - High-bandwidth server
 - Highly-secure server
- User-interfaces for managing collections of sessions
- Cross-session searches

Storage Management

- Spontaneous storage allocation
- Storage of extreme data
 - Archiving and delivering a gazillion different data objects simultaneously
 - Archiving and delivering huge data objects

Beta Grid Interface

- Beginning to explore what on-demand, remote access to AG content means in the context of the Beta Grid