

AG-MIDI, AG-CC,
AG-Sticky

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Presented at AGRetreat2005
by Many Ayromlou

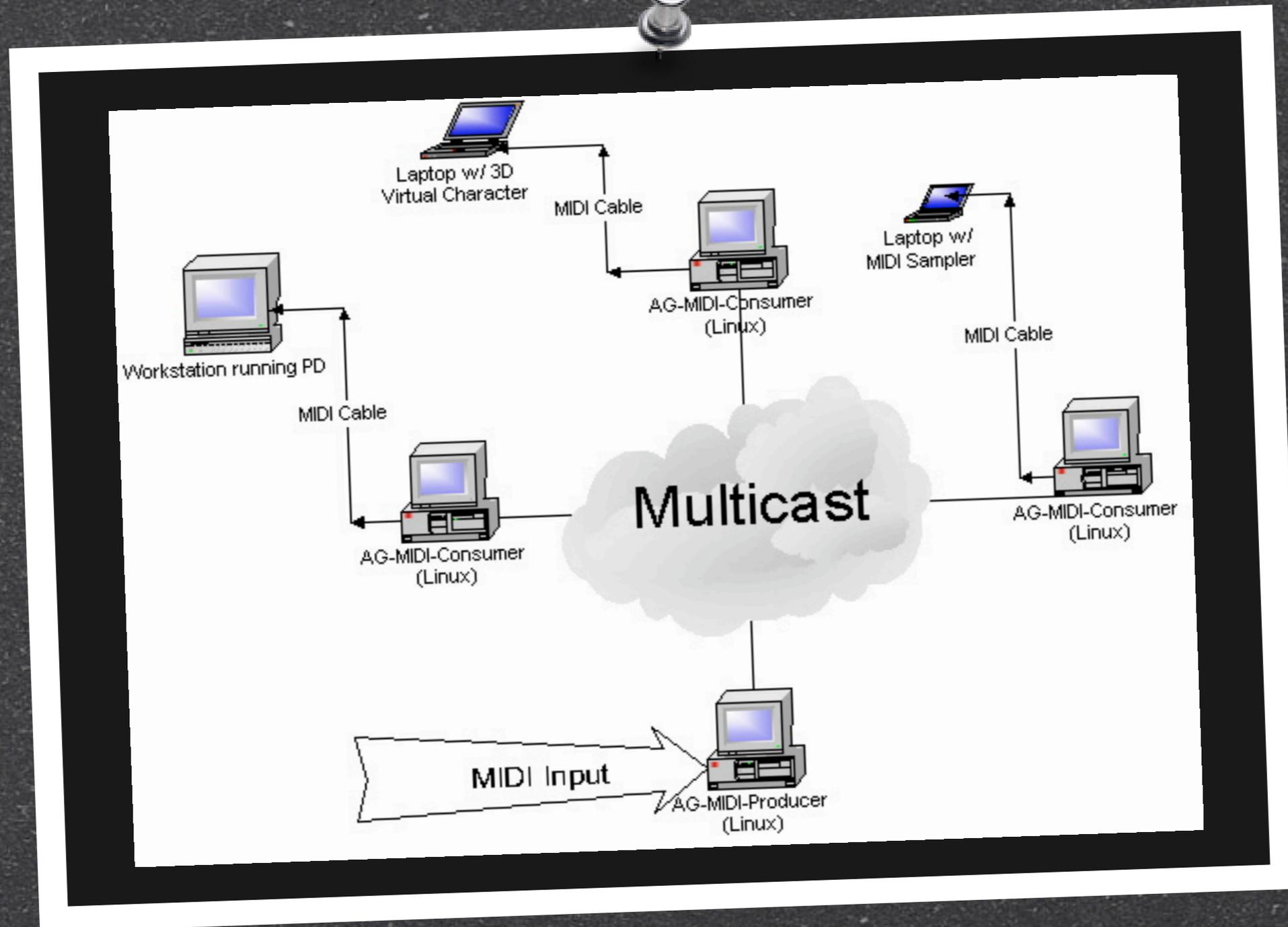
MIDI

- What is MIDI (from MIDI faq)?
 - MIDI stands for Musical Instrument Digital Interface and is an international hardware and software standard.
 - On the Hardware side, MIDI specifies the interface, that allows you to connect electronic musical instruments and computers.
 - It also specifies the communication protocol for passing data from one device to another. This means that the messages these devices send to each other are also standardized.
 - MIDI was initially standardized as a Musical Instrument Interface, but has since been adopted for a wide variety of non-musical applications (ie: Motion Capture, Lighting Control, Performance Automation).

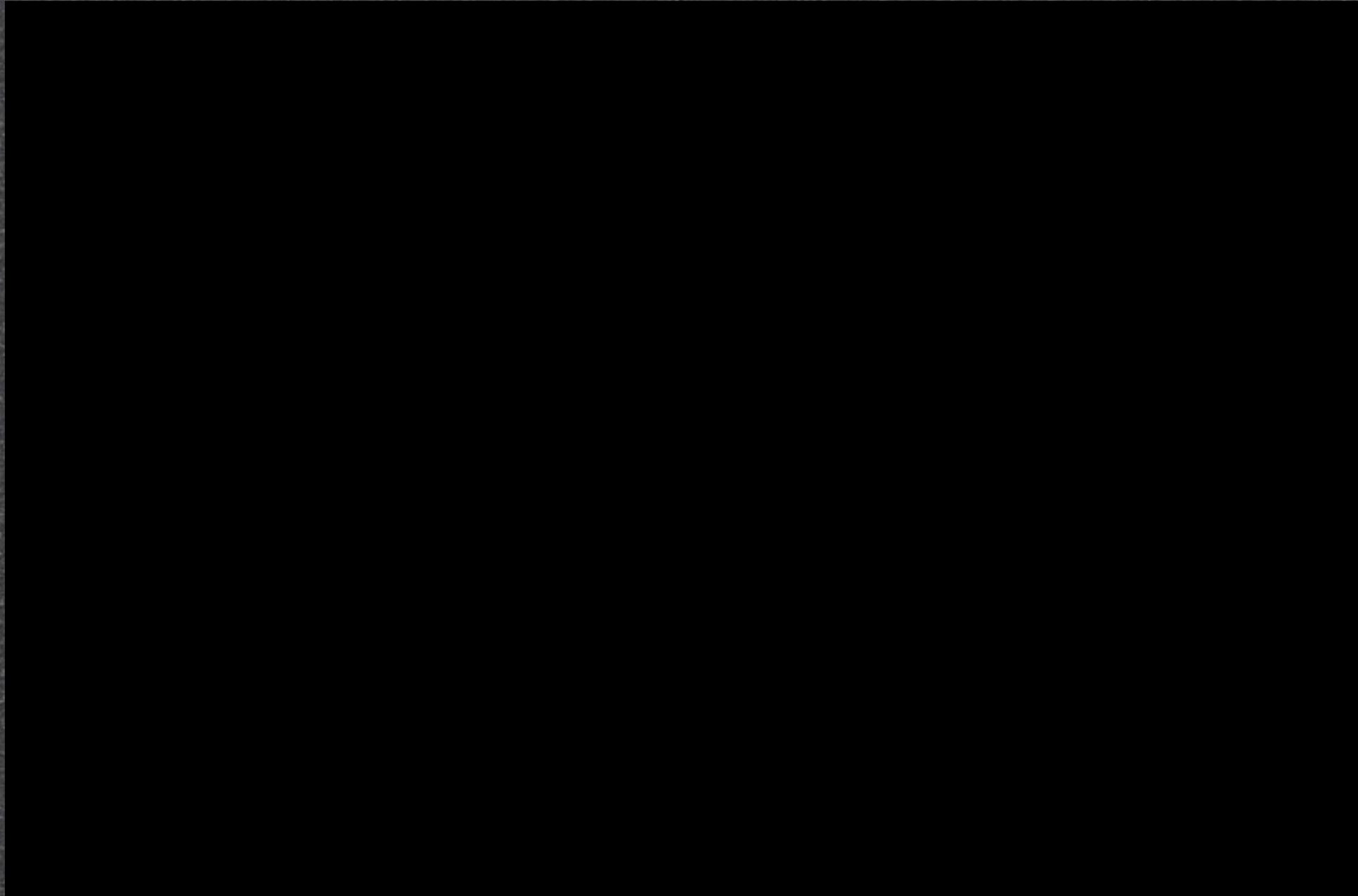
AG-MIDI

- What is it and what does it do?
 - Pair of Multicast Services (producer/consumer) that facilitate sending and receiving of unbuffered raw MIDI over a multicast Network.
- Current areas of deployment:
 - Currently being used by ArtOnGrid participants to transmit motion-capture data (as MIDI) to other participants for use in PureData (PD).
- Potential uses:
 - Music Delivery (multicast MIDI to powerful software sample banks)
 - E-Learning
 - Remote Instrumentation/Robotics
 - Remote Signaling

AG-MIDI System Diag



AG-MIDI in Action



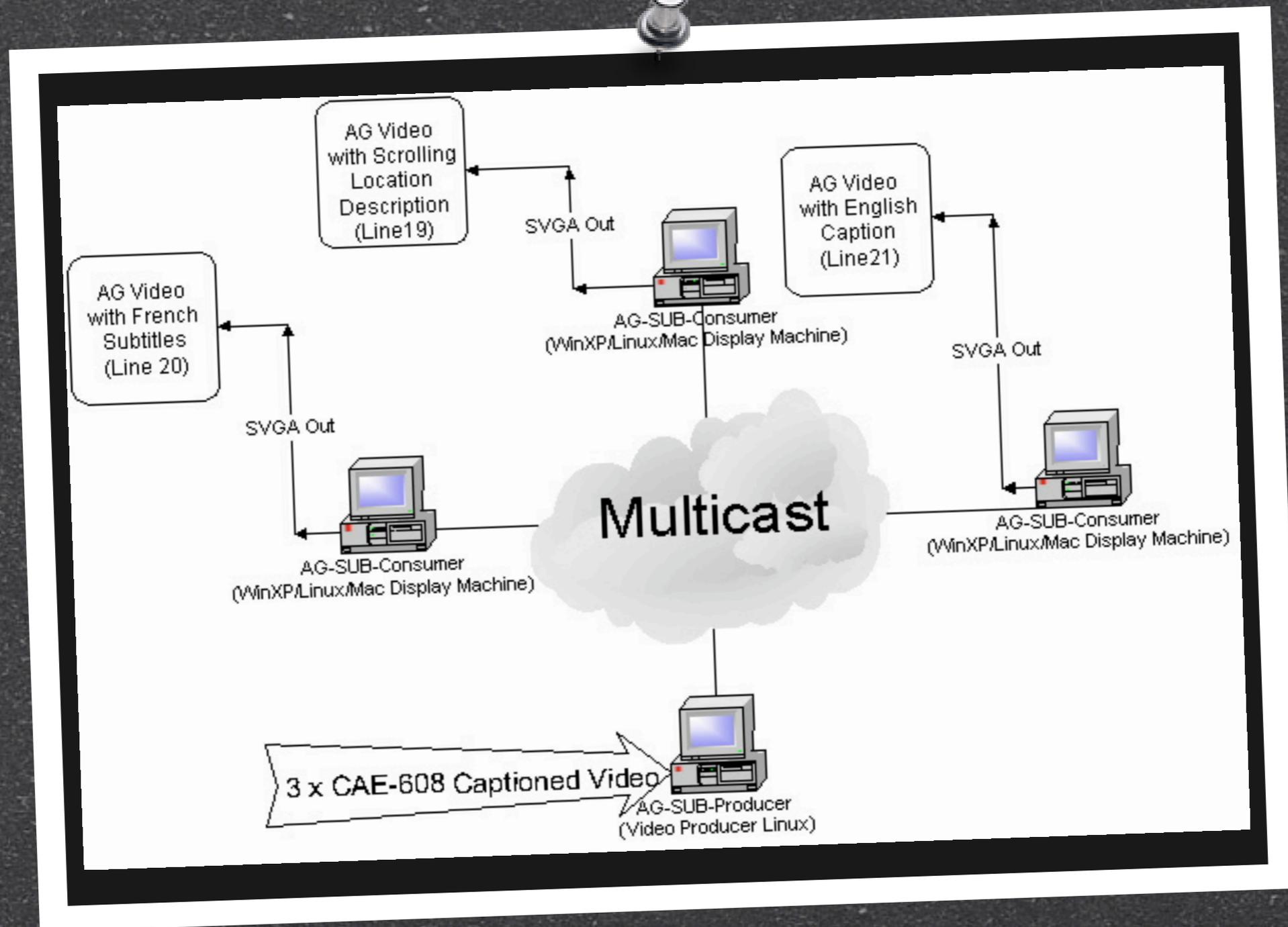
Close Caption

- What is it and what does it do?
 - Text located somewhere on the picture which covers a portion of the screen
 - Closed Captions are captions that are hidden in the video signal, invisible without a special decoder. The place they are hidden is called “line 21” of the vertical blanking interval (VBI).
 - The VBI of a television signal is the part between frames. It consists of a number of lines of video.
 - 2 Fields in NTSC Broadcast. In each Field:
 - 2 chars/frame @ 30 frames/sec = 60 chars/sec
 - Theoretically possible to achieve four simultaneous caption channels at speeds of (roughly) 300 words per minute.

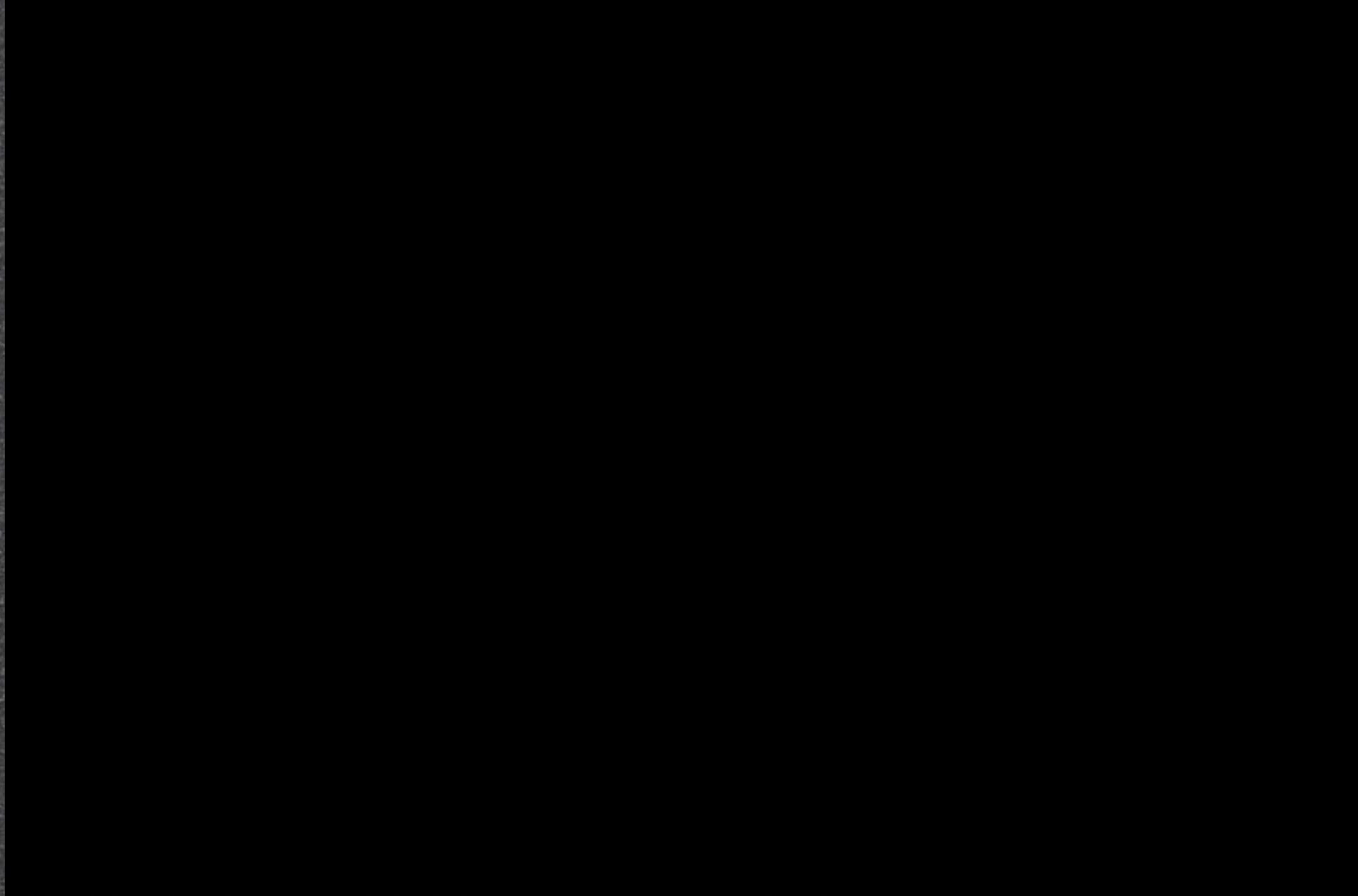
AG-CloseCaption

- What is it and what does it do?
 - A prototype system to demonstrate the feasibility of multicasting CAE-608 (line 21) Close Caption Data.
- Current areas of deployment:
 - Currently being Studied at 3 of our existing AG nodes. Due to lack of 608 encoders, the package is being tested inside Ryerson for the moment.
- Potential uses:
 - Fully close captioned AG video sessions.
 - Transmission of other program related data (other lines other than line 21)
 - Real time Translation

AG-CC System Diag



AG-CC in Action



AG-StickyNotes

- What is it and what does it do?
 - A shared application that brings the concept of Post-It Notes to AG. You can create, delete, store multiple Sticky Notes during a session. The notes are stored on the server for future retrieval.
- Current areas of deployment:
 - Currently only used inside Ryerson University.
- Potential uses:
 - Making notes during AG sessions that span multiple days/weeks.
 - Prepare notes ahead of time and presenting them during a session.
 - Anytime when using the AG Venueclient chat capability is too cumbersome. (ie: leaving notes for other operators before a conference starts)

AG-Sticky in Action



Future

📌 AG-MIDI

- 📌 Extend the service to use RTP protocol instead of raw encapsulated MIDI. This will also allow multiple producers.
- 📌 Introduce FEC's to ensure integrity of data.
- 📌 Introduce adjustable buffering to pseudo-synchronize multiple transmissions

📌 AG-CloseCaption

- 📌 Extend the service to use RTP protocol.
- 📌 Look at the potential for doing 708 captioning (larger char-set, colour, text styles, adjustable text size).
- 📌 Overlay Caption Text onto AG vic video windows.

📌 AG-STICKY

- 📌 Extend the StickyNotes service to optionally interface with MIMIO type electronic whiteboard devices.

Thank you . . .

- Comments, Questions?

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