NDI

NDI is a network protocol that enables audio, video, and metadata signals to be sent over standard networks in real-time. Broadcast-quality video in a high-quality, low-latency

- What is NDI?
- awesome-ndi (github resource)

What is NDI?

NDI (Network Device Interface) is a technology developed by NewTek that allows video, audio, and data to be shared across a local network in real-time. It’s commonly used in live production environments but has endless possibilities for creative applications, especially in theater, performance art, and interactive installations.

Simply said; Imagine you have a projector, a computer, and a camera, and you want them all to "talk" to each other without using a bunch of messy cables. NDI lets these devices send and receive high-quality video and audio over your Wi-Fi or Ethernet network as if they were physically connected. It’s like sending video files across your network instantly—without needing to export or transfer anything.

What Can You Do with NDI?

1. **Stream Video Between Devices:**
   - Send live video from one computer to another (e.g., send a TouchDesigner, Isadora or Resolume output to a projection laptop).
   - Use your phone or tablet as a wireless camera for your performance or installation.
2. **Mix Media in Real-Time:**
   - Combine multiple video feeds in software like OBS Studio or VJ tools like Resolume for live shows.
   - Add live effects or layers to your video feeds.
3. **Integrate with Performance Tools:**
   - Share a live camera feed on stage with a projection in real-time.
   - Sync visuals with music or sound effects in live performances.
4. **Collaborative Artwork:**
   - Share content between artists' devices in a multi-user environment, such as during a workshop or live performance.
   - Use it for interactive installations where different pieces of hardware (cameras, projectors, or phones) are part of the experience.

Why should I use NDI?

- **Flexibility:** No need to move everything into one computer. Let every device do what it does best while connecting them via a network.

- **Cost-Effective:** Avoid buying expensive video switchers or capture cards; NDI works with your existing network.
- **Collaboration:** Great for team projects where multiple artists contribute video, sound, or interaction in real-time.
- **Live Creativity:** Perform and tweak visuals or sounds on the fly, ideal for improvisational art or performances.

What Do You Need?

1. A device that supports NDI (most computers and some cameras do, check out apps like ZIGCAM (mac) or NDI CAMERA (android).
2. Software like **OBS Studio**, **TouchDesigner**, **Isadora** or **Resolume**, which can send or receive NDI streams.
3. A local network (Ethernet is better for speed; Wi-Fi works but might have delays, especially with more than 1 stream).

want to know more:

what-is-ndi-everything-you-need-to-know

awesome-ndi (github resource)

https://github.com/florisporro/awesome-ndi

> Network Device Interface is a royalty-free software standard developed by NewTek to enable video-compatible products to communicate, deliver, and receive broadcast-quality video in a high-quality, low-latency manner that is frame-accurate and suitable for switching in a live production environment.

> This is a curated list of tools related to NDI.