



10 FACTS TO KNOW

about NewTek's Advanced IP Workflow

1 **Turns standard GigE LAN into a live production network**

Unlike IP-based workflows that require expensive networking and infrastructure investments, NewTek's Advanced IP Workflow uses standard LAN networking to connect your equipment, your control rooms, and your production facilities, creating a site-wide production ecosystem where everything sees everything—and any source can be used by anyone for any production.

2 **Simplifies IP-based workflows**

NewTek's Advanced IP Workflow employs simplified configuration and management, bi-directional signal transmission and communication, extensive device networking and access, and sophisticated encoding and communication methods to enable more powerful, more versatile live production over IP on a less expensive, less complicated network infrastructure.

3 **Links every device visible on the network**

NewTek's Advanced IP Workflow utilizes the Network Device Interface (NDI) protocol to make every enabled device, connected source, and video signal on your network—production switcher, replay system, computer, graphics machine, video calling system, etc.—visible and available as a source and/or destination for video over IP. NDI is also openly available as an SDK to any customer, manufacturer, or developer who wants to implement it into their products and workflows to accelerate their transition to IP.

4 **Adds inputs to your production switcher**

The NDI protocol—the foundation of NewTek's Advanced IP Workflow—exposes the inputs and outputs of every networked device, and makes each available as a switchable source. This means you can access, route, and switch with every camera connected to a switcher in your facility, every shared computer on your LAN, every output signal from every device—any production component visible via NDI—increasing your live inputs exponentially without investing in a higher-capacity switcher or integrating video routing hardware.

5 **Enables bi-directional video and audio over IP**

Emerging IP workflows marginalize gains by simply replacing SDI cabling with Ethernet infrastructures. Many methods comprise linear, one-way, point-to-point distribution of a single video output signal over IP to a single destination. NewTek's Advanced IP Workflow permits multi-directional, two-way signal transmission over IP, to and/or from any NDI-enabled device on your network. This means your switcher can simultaneously send its multiple input and output signals to the network for transport to multiple NDI destinations, and receive the input and output signals of every other NDI-enabled device over the network for use as sources.

6 Maximizes encoding performance and efficiency

Common compression technologies for high-quality, low-latency IP transport can consume upwards of 50% of CPU processing power for a single video stream. NewTek's powerful codec enables IP transport that's so fast and so efficient, a single core of a modern CPU processor can accommodate multiple simultaneous, high-quality, ultra-low latency video streams over IP while using lower overhead.

7 Handles up to 10x more video than alternate transport methods

Transporting HD video over IP typically requires high-bandwidth, dual-10Gbit networking to accommodate just a few sources—demanding up to 3Gbps per video stream in many cases. With NewTek's Advanced IP Workflow, it's entirely possible to access double-digit video streams over IP on a standard, 1Gbit network connection, with bandwidth consumption generally ranging from 50-100Mbps per video stream.

8 Provides for resolution-independent production at any scale

With NewTek's Advanced IP Workflow, there is no limit to the number of networked devices that can serve as sources. And it allows for any combination of resolutions—from a thumbnail icon at 1 fps to, say, 8K video at 240 fps with 64 channels of audio—as long as your infrastructure has the bandwidth to support it. Accommodating higher resolutions and frame rates may require adding bandwidth and increasing speeds on your dedicated line or local network, but for most productions, even GigE can be a starting guideline for multiple sources.

9 Uses field-proven IP technology in 100,000 active systems

While others in the live video production industry are just now laying the groundwork for transitioning to IP, NewTek is ahead of the curve. Since our first IT-based video production system was introduced in 2005, NewTek has been progressing towards IP for 10 years. In that time, our IT-based video production technology has been installed in tens of thousands of partner devices, control rooms, trucks, and facilities around the world—and all are fully capable of switching to IP with our Advanced IP Workflow right now.

10 Future proofs video equipment purchases

Standards and formats come and go in the video industry, making facilities uncertain of which to adopt. What makes NewTek's Advanced IP Workflow different is that with NDI, devices are not bound to a single proprietary specification, resolution, or format, and you are not required to conform to specific technical criteria. It's a universal workflow that's accessible to any current or future computer-based production component.

