NewTek™

10 FACTS TO KNOW
About NewTek Enabled IP Workflows

1 **Turns an Ethernet-based LAN into a live production network**
Unlike other emerging IP-based workflows, NewTek Enabled IP Workflows do not require expensive networking and infrastructure investments. With a Gigabit LAN, you can connect your equipment, your control rooms, and your production facilities, and create a site-wide production ecosystem where everything sees everything—and any source can be used by anyone for any production. With a high-bandwidth infrastructure in place, the capacity and the benefits are multiplied.

2 **Simplifies IP-based workflows**
NewTek Enabled IP Workflows employs simplified configuration and management, bi-directional signal transmission and communication, extensive device networking and access, and refined encoding and communication methods to enable more powerful, more efficient and more versatile live production over IP on a less expensive, less complicated network infrastructure.

3 **Links every device visible on the network**
NewTek Enabled IP Workflows utilizes NDI®, NewTek's innovative Network Device Interface technology, 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 available as a royalty free 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**
NDI®—the foundation of NewTek Enabled IP Workflows—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 Enabled IP Workflows 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 Enabled IP Workflows, it's entirely possible to access double-digit video streams over IP using a Gigabit network connection, with a bandwidth requirement of approximately 90-100Mbps per video stream for commonly used HD video formats.

8

Provides for resolution-independent production at any scale

With NewTek Enabled IP Workflows, 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 a Gigabit LAN is sufficient for multiple sources.

9

Uses field-proven IP technology empowering millions worldwide

While others in the live video production industry are just now laying the groundwork for transitioning to IP, NewTek is ahead of the curve. Starting with our first software-driven live production system introduced in 2005, NewTek has been developing and innovating technology for IP-based workflows for more than a decade. Currently, our IP-based video production technology is in the hands of millions of customers around the world, integrated into our products and those of hundreds of third-party companies—all of which are fully compatible with NewTek Enabled IP Workflows *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 Enabled IP Workflows 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.

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