

iTX Integrated Playout Platform

Key Functions



Event Time Specification

Every schedule item within iTX has a time mode which defines how the item will behave with respect to other items within the schedule. Time modes determine whether an item is treated as a primary (full screen) item or as a secondary (overlay) item. They range from Auto Events, which will play the next item immediately after the parent item finishes playing to air, to events triggered at an offset to the parent event. There are also manual triggers, which put an item on hold until "Take Next" is selected.

Content Selector and Event Editor

The various content type plug-ins reside inside the Content Selector, which is dynamic and changes the options available depending on the type of content being edited in the schedule. Each type of item in the playlist has a corresponding Event Editor. When an item in the schedule is selected, its properties are loaded into the Event Editor, and options are presented for customizing how it will be used in the active schedule.



Content Controlled (Manually or Automated) by User Interface

Video Clip

Master control transitions and picture-in-picture (PIP) effects via a 2D DVE can be applied to video clips. Other settings include aspect ratio and audio properties.

Logos

A virtually unlimited number of logos can be keyed over any primary video — live or from files. Varying key levels, audio effects, and video transitions such as wipe, mix and slide can also be applied.

Stills: Full-screen images can be used as stand-alone primary video content or as backgrounds for DVE moves and keyed graphics such as logos and CGs.

CGs

iTX includes an integrated character generator which includes graphics, text, images, templates and numerous other effects and features.

Voiceovers: Audio files can be used as secondary events with any primary video content.

Primary & Simulcast Output

iTX includes the optional capability to support a primary and simulcast output from the same playlist from one device.

Live Events

These are performed by selecting a router source and passing it through as the primary content. iTX includes an option for recording a live event as it airs for later re-use.

Sequences

A pre-defined series of events. For example, a complex news opening sequence, can be created in iTX, stored as a single event sequence, and used on air whenever required.

Subtitles

iTX offers fully integrated support for both open and closed subtitles.

Video and File-based Ingest

The iTX integrated playout platform from Grass Valley, a Belden Brand, provides components for a range of ingest workflows. These include scheduled and on-demand feed recording from satellite or live sources, manual encoding at the Desktop, unscheduled ad-hoc tape ingest, including batch recordings, support for digital file delivery and clip preparation for all modes of ingest. Basic acquisition components are included as standard, while advanced modes of ingest such as scheduled feed recording are available as add-on components.



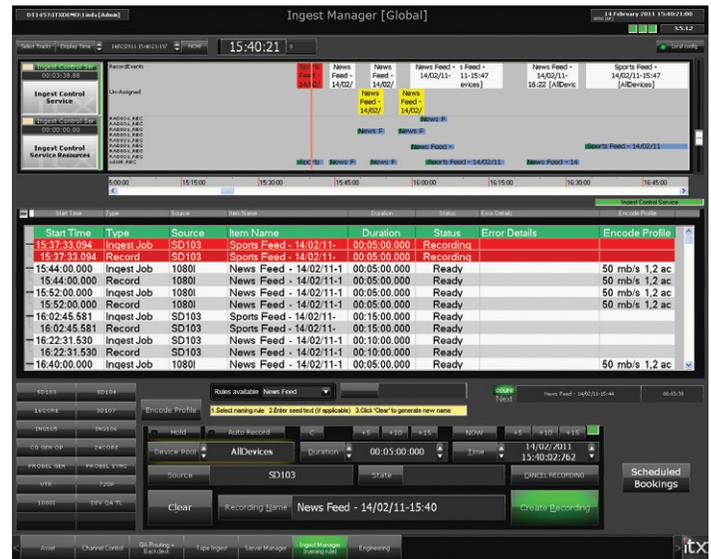
Manual ingest

Ad-Hoc Tape Ingest and Clip Preparation

- The iTX Desktop provides intuitive control of ad-hoc tape ingest and clip preparation using a LAN connection
- Desktop tools simplify the identification, timing and annotation of video clips acquired by all methods of acquisition
- Desktop components include controls for the viewing and timing of recorded clips with frame-accurate in, out and segment markers, as well as the capture of clip metadata, such as titles, descriptions and content types
- Requested dubs are carried out as a background task, allowing additional dub requests and clip preparation work to continue in parallel
- When used with the proxy sub-system, clip preparation can be performed using low resolution proxy copies of content, allowing multiple workstations to access and prepare content

Scheduled and On-Demand Recording

- iTX Ingest Manager is designed to support the demanding operational environments of news and sports
- A highly-flexible feed ingest system that combines the management of scheduled and recurring satellite or live feeds with on-demand recording of feeds
- Provides dynamic assignment of ingest services resources, along with the ability to carry out simultaneous recordings to multiple ingest servers
- With a master recording schedule, multiple users can view resource allocation and have simultaneous access to record scheduling
- A list view of all scheduled recordings is provided, as well as an active timeline view with color highlighting to indicate the status of each recording at a glance
- Unique dual-timeline display shows the status and time allocation of both record sources and ingest jobs



Ingest manager

Digital Content File Delivery

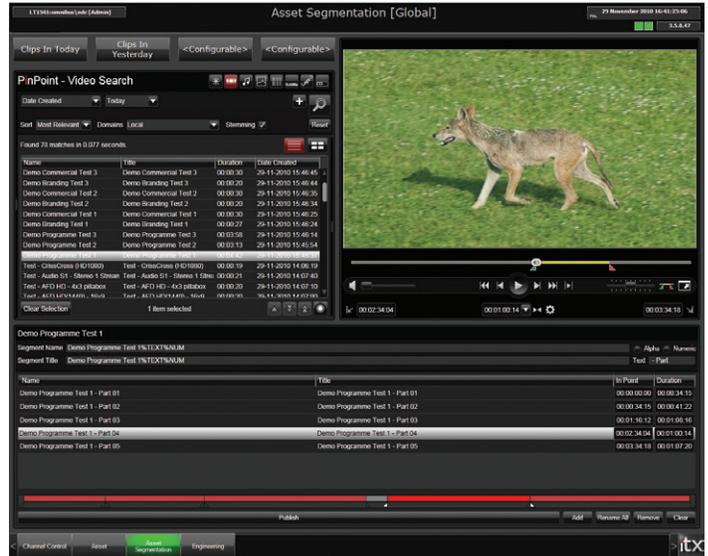
- iTX Delivery Manager provides support for file-based delivery, including spot, program and news content delivery services such as Pathfire, DG FastChannel and PitchBlue
- By communicating with the delivery services' edge servers, Delivery Manager extracts pre-encoded digital content files and associated metadata from content packages, and registers delivered content in the iTX database
- Content selection from delivered packages can be filtered by site-specified rules, or by required content lists, provided by traffic or program management systems

Integrated Content Management

Content management capabilities are fully integrated within iTX, and include the ability to search the content database across multiple locations, add metadata, and create/delete/rename and trim clips.



iTX Asset Desktop



iTX Asset Segmentation

iTX Content Management

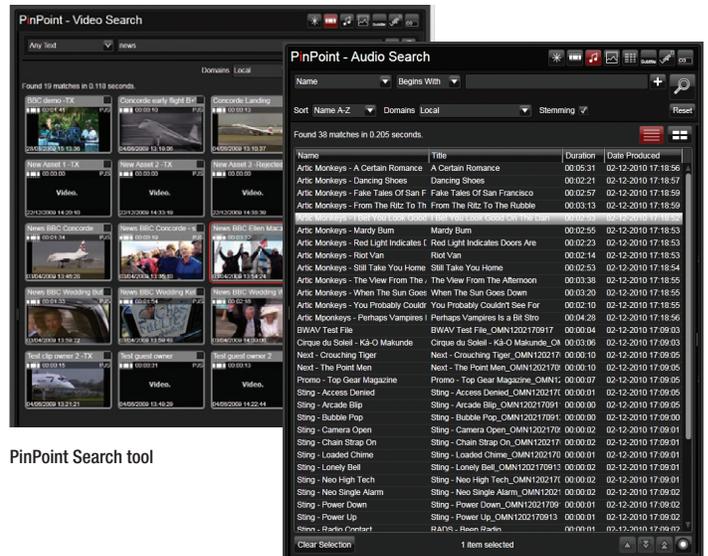
- Allows operators to search for and preview content — both proxies and full resolution
- Adjustment of the in or out points, clip name, video transition and audio level
- Clip information provided by a notes editor, along with information about the locations of the media
- Modifications can be applied directly to the parent media on the database
- Save As feature allows creation of sub-clips which are pointers to the parent clip, and consequently do not take up additional disc space
- Supervisors can manage the content residing on the servers

PinPoint Search

- With the PinPoint Search tool, assets can be selected according to their type and viewed in the preview window
- Assets can be searched by metadata
- A delete button provides permanent deletion of content from the database and/or the Content Store
- Single clip and batch deletion operations
- Space gauge shows the amount of free space remaining on the Content Store

iTX Asset Segmentation

- Rapid and easy clip segmentation
- Automatic file name generation
- Controlled using traditional mark-in/mark-out or specific timecode values
- Segment boundaries are clearly visible



PinPoint Search tool

Content Archiving

iTX offers fully featured support for Front Porch Digital's DIVArchive via a plug-in module within the iTX Media Watcher. This allows iTX to use Front Porch Digital's system for archiving, restoring and deletion.

Archive Functions

iTX assets can be archived using DIVArchive whenever the iTX Media Watcher registers new assets via the Inbox. These include the following asset types:

- Video: MOV, MXF, MPG, MPEG, WMV, AVI, TS, XTL, GXF, SAF
- Audio: WAV, MP3, WMA
- Graphic: JPG, JPEG, PNG, SPG (processed .tzip)
- Caption: CAP

The archive pulls the files from the main iTX location. Media files are not deleted upon archive completion.

Restoring Functions

When new content is scheduled by iTX, the Media Watcher checks for the existence of the media. It first checks locally and, if the media is not found, the archive is checked. Once media is found in the archive, the item is copied from the archive into iTX. On completion of the transfer, media is registered by iTX, and cached to the Output Server(s).

Delete Function

Content from the archive can be deleted by the Media Watcher via an Archive Delete request. This deletes only the requested archive object and related files; the object is not modified on the iTX system.

Streamlined Transmission Control

iTX streamlines the control of one of more channels by a single operator with its state-of-the art automation and intuitive drag-and-drop functionality. The highly flexible control interface allows playout schedules to be created and edited, and offers versatile control of CGs, graphics, vision/audio mixing, voiceovers and live events.

iTX Playout — Flexible channel control

The highly flexible channel control user interface is the primary control layout, and consists of the following key components:

The screenshot shows the iTX Channel Control interface with several key components highlighted by callouts:

- Channel Selector** to choose the transmission channel
- Multi-Track Timeline View** shows the on-air and upcoming events, as well as secondary events such as logos, CGs and voiceovers
- Now/Next Timer** shows the current on-air event, with a count-up to its scheduled duration, and the next scheduled event with a countdown to its start
- Playlist View** displays a detailed list of all items in a schedule. This is hierarchical and can be compressed to show only primary events
- Schedule Manager** used to load new schedules, and to save schedules created in an iTX Edit Channel
- Playout Control** used to trigger manual events, hold events or skip upcoming events
- Content Selector and Event Editor** used to select content for added events or change the characteristics of an existing event, such as transitions and durations

Start Time	Type	C	T	N	W	Item Name	Item Title	Duration	Status	Source
16:12:40.70	Video Clip	T	I			- Demo Programme Test 3	Demo Programme Test 3	00:03:58.680	OnAir	WLT154
16:12:40.70	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:58.680	OnAir	WLT154
16:16:39.38	Video Clip	T	I			- Demo Branding Test 1	Demo Branding Test 1	00:00:27.024	Ready	WLT154
16:17:06.40	Video Clip	T	I			- Demo Programme Test 2	Demo Programme Test 2	00:03:13.840	Ready	WLT154
16:20:20.24	Video Clip	T	I			- Demo Commercial Test 2	Demo Commercial Test 2	00:00:30.024	Ready	WLT154
16:20:50.26	Video Clip	T	I			- Demo Commercial Test 3	Demo Commercial Test 3	00:00:30.072	Ready	WLT154
16:21:20.34	Video Clip	T	I			- Demo Programme Test 3	Demo Programme Test 3	00:03:58.680	Ready	WLT154
16:21:20.34	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:58.680	Ready	WLT154
16:25:18.02	Video Clip	T	I			- Demo Branding Test 1	Demo Branding Test 1	00:00:27.024	Ready	WLT154
16:25:46.04	Video Clip	T	I			- Demo Programme Test 2	Demo Programme Test 2	00:03:13.840	Ready	WLT154
16:25:46.04	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:13.840	Ready	WLT154
16:28:59.88	Video Clip	T	I			- Demo Commercial Test 2	Demo Commercial Test 2	00:00:30.024	Ready	WLT154
16:28:59.88	Video Clip	T	I			- Demo Commercial Test 3	Demo Commercial Test 3	00:00:30.072	Ready	WLT154
16:29:59.98	Video Clip	T	I			- Demo Programme Test 3	Demo Programme Test 3	00:03:58.680	Ready	WLT154
16:29:59.98	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:58.680	Ready	WLT154
16:33:58.68	Video Clip	T	I			- Demo Branding Test 1	Demo Branding Test 1	00:00:27.024	Ready	WLT154
16:34:25.68	Video Clip	T	I			- Demo Programme Test 2	Demo Programme Test 2	00:03:13.840	Ready	WLT154
16:34:25.68	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:13.840	Ready	WLT154
16:37:39.52	Video Clip	T	I			- Demo Commercial Test 2	Demo Commercial Test 2	00:00:30.024	Ready	WLT154
16:38:09.54	Video Clip	T	I			- Demo Commercial Test 3	Demo Commercial Test 3	00:00:30.072	Ready	WLT154
16:38:39.62	Video Clip	T	I			- Demo Programme Test 3	Demo Programme Test 3	00:03:58.680	Ready	WLT154
16:38:39.62	Logo-Duratio	T	I			- Logo Test 1	Logo Test 1	00:03:58.680	Ready	WLT154
16:42:38.30	Video Clip	T	I			- Demo Branding Test 1	Demo Branding Test 1	00:00:27.024	Ready	WLT154

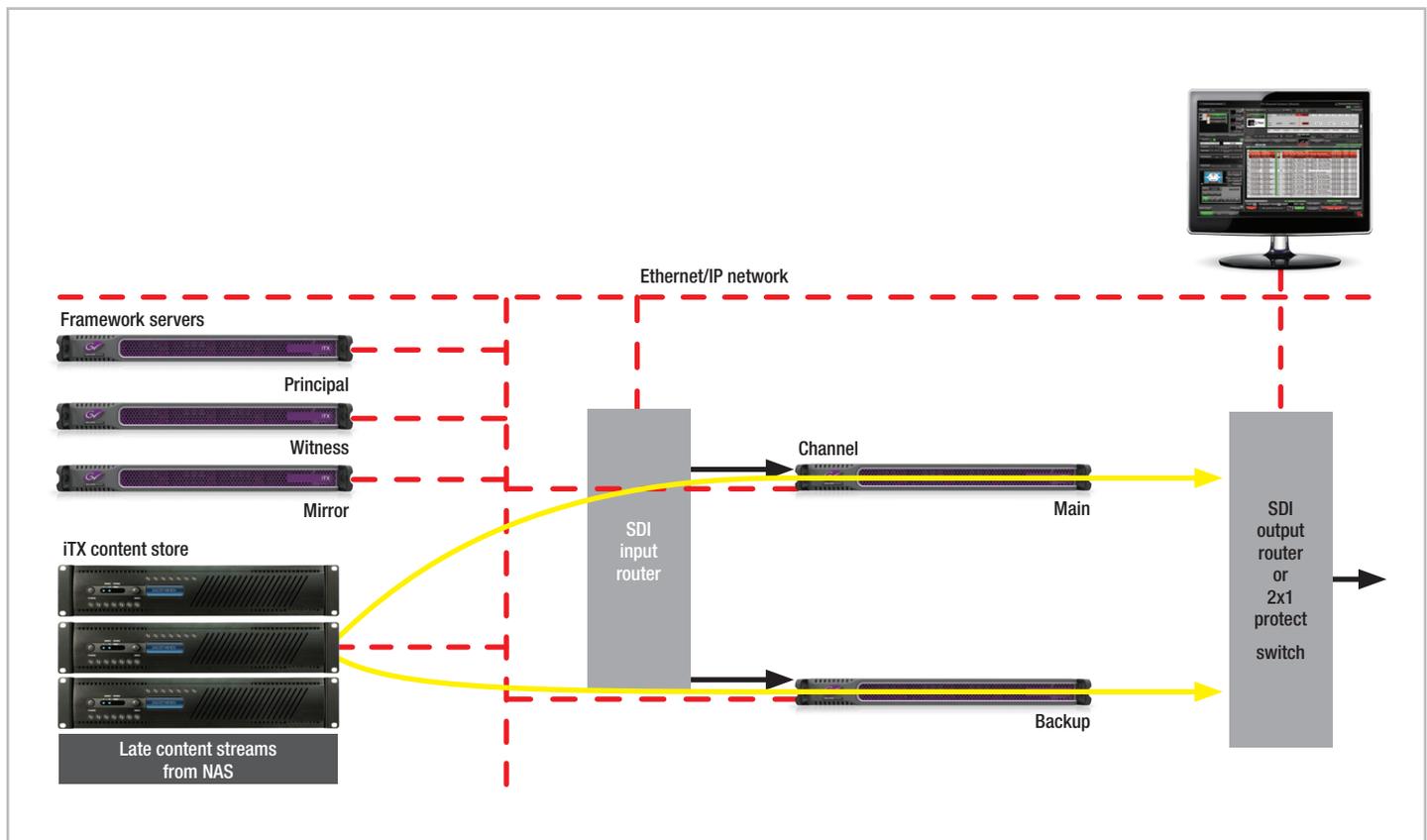
iTX Integrated Playout Platform Key Functions

The iTX Output Server supports a range of file formats natively, with no need for transcoding:



Local Caching and NAS Streaming

In the normal iTX transmission process, content required by the air schedule is copied to the Output Server cache, from where it is played to air. As content is played and no longer required by the schedule, the cached copy is automatically deleted, and more new content is copied to the cache. However, late-arriving content can be decoded and played by the iTX Output Server by streaming directly from the Content Store (NAS). Any live sources from satellite or studio are routed directly to the Output Server, and can be mixed and branded just like recorded content.



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