2012

Broadcast

Online

Video

Sports

Training

vizrt

Vizrt creates leading-edge content production tools for the digital media industry – from award-winning 3D graphics & maps through integrated video workflow solutions and online publishing tools.

VIZRT'S BUSINESS MODEL provides its customers with complete packages, including hardware, professional services, installations, support, etc. Our soon to be 600 employees are spread across 40 local offices worldwide. Vizrt installations are found in more than 100 countries, powering over 3,500 TV channels and around 600 Internet media sites. In addition to regional presence in Eastern Europe, East Asia, Latin America, and the Middle East, Vizrt has main offices in the following countries: Argentina, Australia, Austria, Bangladesh, China, Hong Kong, India, Indonesia, Israel, Japan, Korea, Norway, Philippines, Russia, Singapore, South Africa, Spain, France, Sweden, Switzerland, Thailand, UK, and the US.

Having started as a company providing smarter solutions for on-air graphics, Vizrt today provides the digital media industry with a complete set of products. Graphics, video management, online publishing, and streaming solutions are all covered. Vizrt has also acquired LiberoVision, the world's leading supplier of advanced sports analysis tools. Our head office is situated in Bergen, Norway.

Vizrt's product suite is used by the world's leading broadcasters, publishing houses and telecom operators, including: CNN, Al Jazeera, CBS, Fox, BBC, Sky, ITN, ZDF, SVT, Star TV, Network 18, TV Today, CCTV, NHK, The Globe and Mail, The Telegraph, Welt Online, Etisalat and Telia Sonera. Furthermore, many world-class production houses and institutions, including both the New York and London Stock Exchanges, utilize Vizrt solutions. Vizrt is a public company traded on the Oslo Main List: VIZ, ISIN: IL0010838154.

Mr. Martin Burkhalter
CEO / Vizrt

Martin Burkhalter joined Vizrt in April 2006 as Chief Commercial Officer, before he became Chief Operating Officer in June 2009. In May 2010 he was appointed CEO of the Company. Before joining Vizrt, Mr. Burkhalter held several senior executive roles (CEO, Managing Director) in large international companies like Intersport International and Reebok. He was also Senior Vice President and Sports Director of the Lillehammer Olympic Organization Committee (1994).

Views from Martin

Vizrt is now a fully-fledged digital media systems provider, ready to continue enriching and simplifying the way our customers tell their stories for every platform on which they want to tell them. And we will be helping them to do that for a long time to come.

UNTIL FAIRLY RECENTLY, the technological challenges media companies faced were simple and linear. It worked like this: you adopt a new technology to replace the old one you've used for the last ten years. You plan for it, budget for it and you migrate to it easily, so that once again you have only one system to worry about. About ten years later, you can expect you may need to do the same all over again. This is how TV moved from production on film to analogue, then to digital standard definition, later upgrading to HD and now to 3DTV. The print medium also passed equivalent technological milestones, as did telecommunications.

Going forward, we cannot rely on a convenient conveyer belt of linear progression any more. When digital, file-based technology changed the medium of television, it also opened a Pandora's Box of platforms which appeared almost overnight. Instead of moving one platform forward, they branched sideways, offering alternative ways of delivering content. With no controls, no precedents and almost no quality standards, the orderly world of TV, radio, music and newsprint found itself under direct attack. The traditional media discovered they could not control these new platforms and could not compete effectively with them either. The rules had changed completely. Used to sharing viewers with a few similar national broadcasters, TV stations found their audiences fragmented by hundreds of digital niche competitors, ironically losing peak-time share to their own back-catalogue hits, recycled by these competitors. But even niche channels are in danger of losing their small audiences to the 24/7 lures of social media and YouTube, which don't follow any defined schedule or broadcasting rules.

Vizrt's customer base of traditional media, such as TV channels, newspaper groups and online publishers, have needed to adapt quickly to reclaim the ground they lost to the new media platforms. They have learned the new rules of the game and in many cases have restructured their thinking on content delivery completely. Most have embraced the new platforms so that new workflows

ensure that their professionally-produced, high-quality content still gives good value no matter how it is consumed. However, that content has to be shaped by the format of each platform and delivered in the optimum way each consumer expects it, at the time of their choosing. This is no trivial process, especially since commercial viability of publishing content on the new media platforms is far from guaranteed, on platforms where free access is still the norm.

When one of Vizrt's customers decides to take this bold step, it is reasonable for them to expect that a technology partner who helped them become successful on their traditional media platform will help them again with their new media initiatives.

And this is where Vizrt is today. We are no longer just a graphics company or just an online publishing company or even just an anything. All our graphics, asset management, online and mobile technologies interact and complement one another, making all traditional boundaries so blurred that they are no longer distinguishable. Instead of a collection of parts, they are now a very powerful whole.

Vizrt is now a fully-fledged digital media systems provider, ready to continue enriching and simplifying the way our customers tell their stories for every platform on which they want to tell them. And we will be helping them to do that for a long time to come.

# *The very idea of Vizrt was shaped by people tired of working with insufficient broadcast graphics tools.*

Over the last few years, the overall turnover has gone up from 38,8M USD in 2006, to 125M USD in 2011. The number of employees has increased accordingly; 164 employees five years ago and 585 at the end of 2011. The fiscal numbers from 2006 onwards also highlight a positive trend, with a strong increase in revenue, an indication of the Company's leading position in the media industry.

Vizrt's business model aims at providing customers with the complete package; including hardware, professional services, installations, support, and so on. And it doesn't matter where the customer is located. Our presence in all the major markets around the world makes it possible to keep a local focus.

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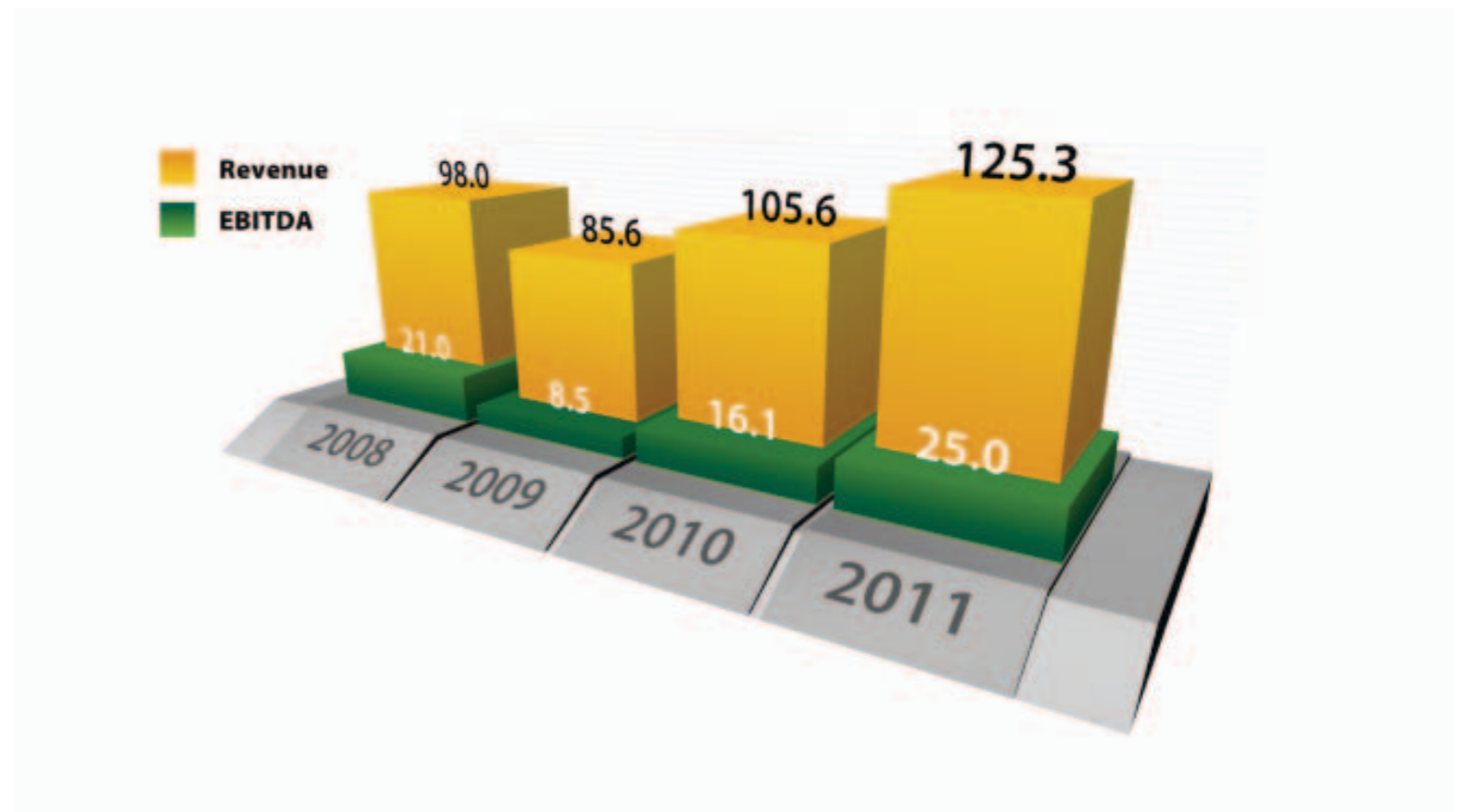
The Vizrt workflow
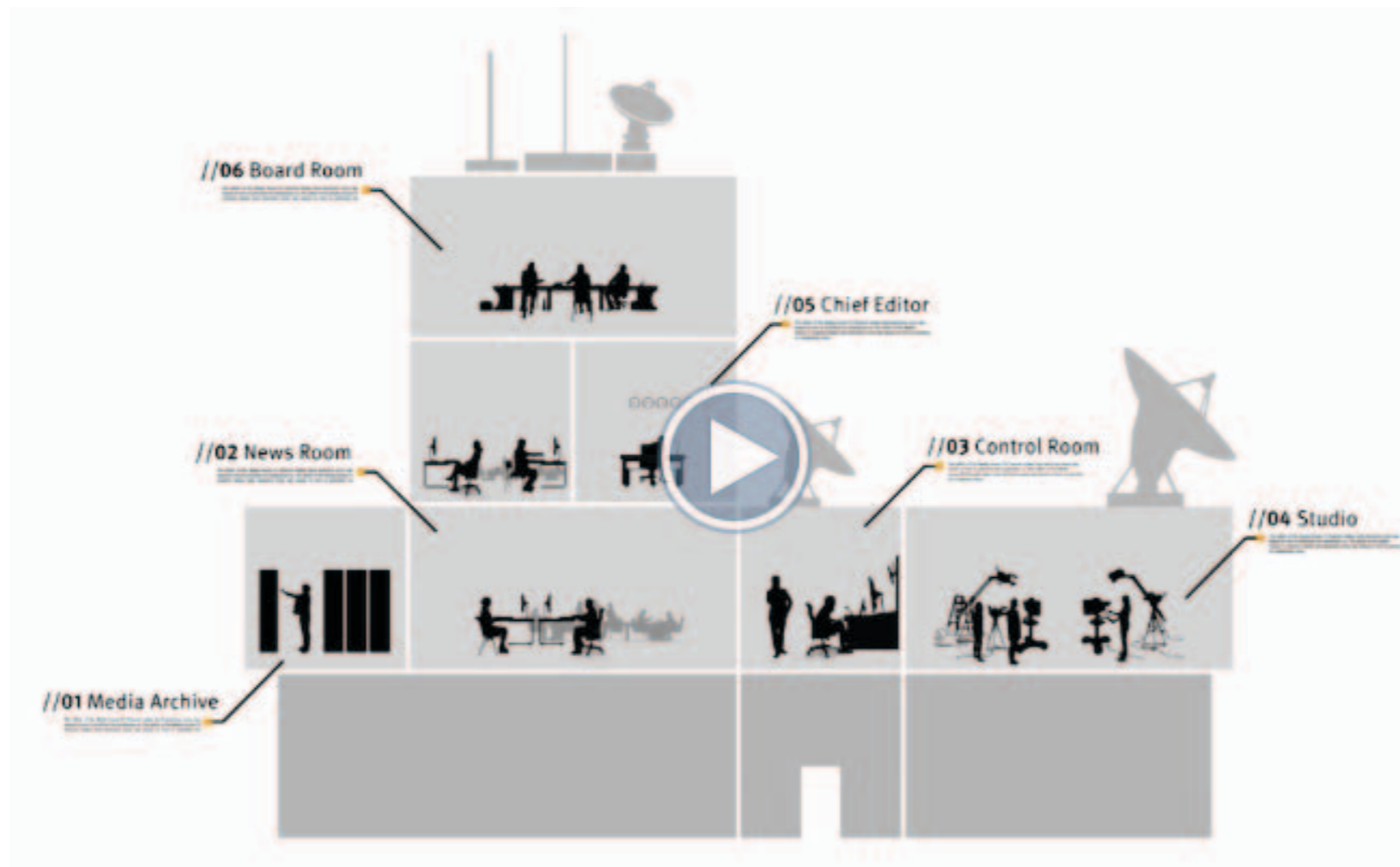
From local to global

A selection of our customers

Global partnerships

A selection of our partners

Device adapted graphics

Imagine a TV production without graphics. A strange question, you say?
Well, you're not alone in thinking that way. In fact, over the last few decades,
the connection between graphics and video in TV production has grown to a
level where it's hardly possible to separate one from the other.

Until today, the graphics/video relationship has been a one-to-one – a set of graphics designed to fit all kinds of video. Today, with more than a thousand mobile devices on the market, not to mention the growing array of tablets available, this relationship is breaking up. The most obvious change when moving from single format TV production, to multi-device targeting, is the difference in screen sizes. However, content owners also need to take into consideration different viewing habits, skinning options, as well as localization and personalization of content and advertisement.

We at Vizrt are committed to delivering software that helps any content owner in reaching whatever device their desired end user operates on. Within the Vizrt workflow, the central tool for handling this is the Viz Media Engine, in combination with Viz Engine.

Broaden your reach with Viz Media Engine

As multi-platform distribution becomes increasingly important, so does the job of getting your content onto whatever device your customers are using. Viz Media Engine is the first solution on the market for cross-platform media delivery.

When approaching newer and smaller screens, the first we think of is the font display. Fonts might seem insignificant when it comes to branding, but they're certainly not. There's not a single more important item when it comes to building a consistent brand. Branded fonts are the strongest building blocks when building a consistent look. Therefore, the workflow used for building device-adapted graphics should accommodate for using branded fonts.

In general, Vizrt avoids advanced transparency layers and uses less animation for videos running on the smallest screens. As we reach higher bandwidths and larger screens like the iPad or a Galaxy Tab, we can take advantage of more of these effects.

Having considered the size of a new device's screen, the second challenge is the new types of viewing habits. The new screens are generally watched by no more than one person, and at his or her own initiative. Combined with login information, this makes it possible to personalize the graphics according to pre-defined profiles and also serve localized and personalized advertisement.

All new screens are different in terms of pixel size, area and viewing distance. As a consequence, we need to take care of the legibility of each one of them. One scenario is what to do with graphics from a TV production originally designed for high-definition (HD). Here, the smallest font needs to be scaled up when displayed on for instance an iPhone.

Another point to take notice of is when videos with graphics are scaled down and compressed. With regard to both size, frame rate and compression algorithms, certain elements need taking care of in order to optimize the graphics.

There are basically two main workflows for device-adapted graphics. One is to burn the graphics into the video, the other to put the graphics on top at the end device. As of now, the first is maybe the most viable – although we see a large

interest also for the second option. No matter which option you choose, however, we at Vizrt feel that the challenges are much the same. We need to take care of metadata and time it in order to produce the graphics – either in the transcoding process, or on the final device. Vizrt has an answer, whatever method you want to use.

In order to produce multiple streams of videos with device-adapted graphics, our first method is to do this in the transcoding process. Our Viz Media Engine is the tool for this job. The typical content owner transcodes videos into twenty to thirty different video streams before distribution. They all have different sizes, frame rates, codecs and so on. When adding graphics in the transcoding process, the Viz Media Engine will request the Viz Engine to deliver the necessary frames that are added in the transcoding process. Prior to this request, the graphics have been put into three or four sets that will serve the different screen sizes.

Beyond putting sensible graphics and readable fonts onto all kinds of new devices, thus producing a high quality product,

device-adapted graphics might give birth to new ideas as well. One of the things our customers are asking for is being able to produce the same video with multiple brands simultaneously. We also see a lot of interest in localized and personalized advertisement, as well more simple options like selling advertisement to just iPhone and iPad streams, or exclusively target Android users.

In all, device-adapted graphics might seem like a small detail. Once you start to think about the whole workflow, however, one quickly sees that its implication requires careful planning when building up the new workflow architecture. The ideal flow requires harvesting metadata all the way from the camera situation; give the video further enhancements in the newsroom, and delivering the metadata to the transcoder or onto the final device. At Vizrt, we are already witnessing how our first customers are benefiting tremendously from this new workflow. It's clear to us that this challenge will increase greatly importance in the years to come.

Broadcast

Video and Graphic content presented properly can take the average story and transform it into something compelling and easy to understand. Having top-notch tools to edit this content allows journalist to focus on the story while our solutions streamline the content creation process.

Did you know that Fox Sports…

…used Vizrt graphics during the 2011 Super Bowl final? FOX began using Vizrt at the beginning of the 2010 NFL season and deployed Multiple Viz Trio and Viz Engine systems for the Super Bowl's expanded coverage. – The Vizrt presentation was seamless. In all, I believe it was one of the most visually impressive Super Bowls ever, says Zac Fields, Director of Remote Graphics at FOX.

THE RIGHT MIX OF GRAPHICS can help to transform a good show into a must-see event. Vizrt provides tools for every aspect of the broadcast production process. From news and sports to elections and weather forecasts; our broadcast products help you create stream-lined workflows with focus on attractive content. We're extremely proud to state that we're the world's number one provider of on-air graphics.

Creating broadcast graphics begins in Viz Artist. It enables designers to build complete virtual sets and complex 3D animations; it allows the integration of maps and fully supports video throughout the workflow. Even when it comes to everyday tasks, such as building geometry or creating fonts for lower-third graphics, Viz Artist is the tool of choice.

Viz Artist was developed together with one of the most powerful rendering engines on the market; Viz Engine. Viz Engine renders animated 2D and 3D scenes in real-time and supports play-out both in SD as well as HD. And those broadcasters who want to dive into the 3D realm will be pleased to hear that Viz Engine is fully capable of playing out stereoscopic content.

Vizrt's graphics systems also help to streamline existing workflows from creation to play-out. Vizrt's advanced template system takes graphics created with Viz Artist and makes them available for journalists and operators in the Viz Trio character generator and the Viz Content Pilot production tool. It has never been easier to play out professional looking graphics without actually having to do any design work.

Viz Virtual Studio™

Virtuality never looked this good

The Viz Virtual Studio module offers the only scalable, open and complete family of solutions for virtual studio production in the market today. It features a comprehensive studio and production workflow and impressive graphics capabilities.

✓ The perfect match between the real and virtual studio

✓ Open system to integrate any studio device

✓ Supports all tracking technologies

"

The new studio introduces a lot of state of the art technology in our news production and the modernized workflows provide a lot of potential for the future."

Thomas Lauterbach / ZDF System Engineer

VIZ VIRTUAL STUDIO presents producers with unrivaled possibilities. Complex 2D and 3D virtual sets, which include interactivity, can be easily created using an intuitive interface.

The solution was created to fully support the Vizrt family of applications and can be seamlessly integrated with existing software installations. Viz Virtual Studio supports all major camera-tracking solutions and other studio peripherals.

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It delivers the highest quality visual image for the most challenging productions, while providing an easy-to-use drag-and-drop interface. The Defocus Shader is a new development in the latest version of Viz Artist.

It emulates the focus effects of optical lenses to create a virtual set that is almost indistinguishable from a real world studio.

FREEDOM FOR CREATIVE MINDS.
Viz Virtual Studio integrates with a wide range of camera tracking solutions and external studio peripherals. The scenes for a set are created with Viz Artist, where the graphic designers build, animate, and compose their virtual environment.
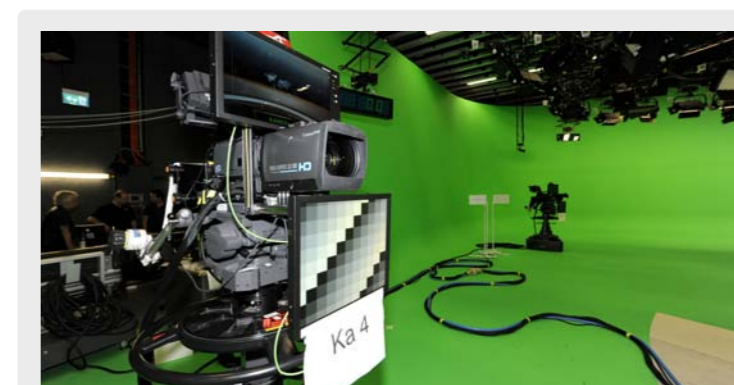
ZDF – Europe's biggest virtual studio

With Viz Artist, even the smallest stage area can be turned into an impressive studio. Existing sets can be enhanced with virtual objects with which the anchor can interact. Viz Virtual Studio allows a single operator to handle complex productions that would normally require several different operators, allowing staff to concentrate on other tasks, improving overall efficiency.

PART OF THE VIZRT PRODUCT FAMILY. Viz Virtual Studio shares all the advantages and benefits of the Vizrt family of tools. It includes the Viz Engine real-time renderer, Viz Artist, and a special virtual set version of Viz Content Pilot. Viz Virtual Studio now also features a high quality, fast and lightweight internal keyed rivalling some of the dedicated external for a fraction of the cost.

ITV News at Ten

KEY FEATURES

- Fully compatible with Windows and Panasonic AV-CGP500 HD

- Easy and intuitive interface for authoring and editing of real-time graphics

- Supports custom templates for on-air control and operation

- Extensive plug-in effects for text, image, particles, curves and DVE effects

- Lens calibration tools for a perfect match between the real and the virtual studio

- Supports all tracking technologies

- Open system designed to integrate and control any studio device

- Seamless newsroom integration with all major newsroom systems

- Optional Viewpoint™ library optimized for real-time rendering

- Support for real-time 2D and 3D fonts

- Expandable for all other Vizrt applications

- Support for all major input and output formats in both SD and HD

ITN's development of a virtual touch screen

Virtual touch screens are used by Vizrt customers all over the world as part of Viz Virtual Studio sets. When one of Britain's biggest TV networks relaunched their flagship, Vizrt played an important part.

"

Our presenter was able to explore every possible coalition scenario, involving 11 different parties!"

Ian White / Head of Computer Graphics / ITN

Virtual touch screens have been exhibited extensively by Vizrt at IBC, NAB and other events, as a concept for customers to make use of. Here is a description of why virtual touch-screens were adopted at ITN and how they have been used since, by Ian White, Head of Computer Graphics for ITN.

When presenters can interact directly with a virtual graphic by touching or sliding, it gives the graphic a greater sense of reality and preserves the "magic" illusion of the set. This was especially the case during the recent US mid-term elections, where presenters could be seen sliding huge virtual wall panels of voting graphics with just the flick of a finger.

Ian White, Head of Computer Graphics for ITN, tells the story behind their virtual touchscreen project

When we re-launched our flagship news programme, "News at Ten", in January 2008 we wanted to enable our correspondents to control their own graphics using a touchscreen within our studio. An added complication is that our studios at ITN are virtual, shot against a chroma green screen. This means that anything green on the touchscreen would be keyed out and rendered invisible by the Vizrt virtual set system! There is a high probability that most content we'd want to show on the touchscreen would contain some green.

The solution we came up with was actually to make all graphics on the touchscreen monochrome green and to shroud the entire touchscreen, stand and all, in green. We then replaced the now invisible real touchscreen with a virtual touchscreen positioned to exactly match the real one. The presenter can see their green graphics well enough to touch and interact with them, but the viewers only see a beautifully rendered full color virtual touchscreen – and all in real-time.

An interactive Viz Artist (2.8) scene running on the real touchscreen

controls the virtual graphics rendered by the virtual set system. The virtual touchscreen has one big advantage, it no longer has to look like real LCD or Plasma, which is usually rather dull. For the News at Ten set we created a slim sheet of interactive glass, and because the set is virtual, we were able to make the glass and the graphics within it translucent, allowing the set backdrop to be seen through it. Something impossible to achieve with a real LCD in a real set!

For our live Election 2010 programme we took this technique even further. Our Election virtual reality set was made up of many glass panels, including a virtual holographic glass wall containing interactive 3D graphics.

We used two invisible touchscreens to create an interactive surface. Our presenter had full control of her graphics including the wall graphic we called the 'Battleground' comprising over 200 of the most important 'target' seats the Conservative party were trying to win.

The 2010 UK general election finally resulted in a hung Parliament consisting of a coalition of the Conservative and Liberal Democrat Parties, and our presenter was able to explore every possible coalition scenario, involving 11 different parties!

She manipulated the 3D VR graphic interactively and all the calculations were done automatically within the Viz scene, from live election data.

The overall impression for the viewer was clear, clean graphics seamlessly integrated into the studio, which the presenter could freely interact with to analyze and explain the story as it unfolded.

Viz Engine™

The ultimate real-time compositor

Viz Engine renders animated 2D and 3D scenes in real-time, producing high-end animations in SD and HD.

- ✓ Extremely powerful rendering engine

- ✓ 3D real-time graphics with live video inputs, fill + key outputs

- ✓ Supports stereoscopic output

"

Being the most trusted news organization in the country, we're constantly finding ways to improve our programs. In our recent rebranding, Vizrt proved to be instrumental in helping us achieve a look that is truly innovative and world-class."

Sheila Paras / Head of Creative Imaging / GMA News

VIZ ENGINE is one of today's most powerful rendering engines. From the beginning, Viz Engine has been developed with flexibility in mind. This allows customers to integrate their own proprietary control software with ease. In addition, a powerful scripting language supports easy manipulation of graphics objects, as well as the creation of user-specific plug-ins.

The Viz Engine application is built on top of OpenGL. This makes it one of the few 3D systems that can run the same graphics content on multiple hardware platforms and operating systems. Furthermore, Viz Engine runs on off-the-shelf, rack-mountable Windows PCs with a standard graphics card.

EASY COMMUNICATION. The main Viz Engine components and Viz Artist GUI run on the same machine and communicate via TCP sockets. The communication protocol between the GUI and the kernel is consistent and easy to understand. All the commands are similar in structure, consisting of an object name or address, a command or function name, the function arguments plus additional data when necessary. The protocol also includes a full set of query commands for retrieving detailed status information about graphic content from the engine.

Full 3D environments rendered in real-time

This makes it easy to write external applications to control the Viz Engine kernel in runtime. Vizrt offers several external command protocol products that are specific to the broadcast industry, including Viz Content Pilot and Viz Media Sequencer Engine. Third party developers can create their own specific applications within, and on top of, Viz Engine.

Stereoscopy

Stereo support is native for Viz Engine.

Viz Engine has always been a real 3D system. Even though graphics have so far mostly been played out on conventional 2D screens, the graphics themselves have always been in real 3D. That's why Viz Engine was one of the world's first systems to support stereoscopy right out of the box. By simply syncing two Viz Engines, broadcasters can create real-time stereoscopic graphics just as easily as 2D graphics.

FLEXIBLE HARDWARE SUPPORT. The combination of a powerful plug-in API and a simple ASCII communication protocol makes a very flexible foundation for various applications. Given the availability of competitive high performance graphics hardware in the market today, Viz Engine can be used as the complete graphics layer for applications requiring high-fidelity graphic content and interactivity.

Viz Engine on the PC platform can be configured with an optional Matrox X.mio™ video board that will further enhance its capabilities. With a Matrox board, Viz Engine supports real-time video output both in HD and SD, as well as in PAL and NTSC. The Engine can then handle two independent SD/HD video inputs in RGB, or one RGBA input used for background or live video textures. With a Matrox board, Viz Engine supports clip playback in a variety of formats: DVCPRO 25Mbit, 50Mbit, and MPEG2, and IMX.

Configured with just a graphics card, Viz Engine can render with DVI output, render to disk or take streaming video

content in and out. The Viz Engine renders real-time content and outputs the IP stream so the video can then be easily distributed to the web, mobile devices or even converted to a video signal for on-air purposes.

With integration to the DVS SpycerBox, the need for a local cache can be eliminated. SpycerBox streams video content from a SAN (Storage Area Network) directly to Viz Engine.
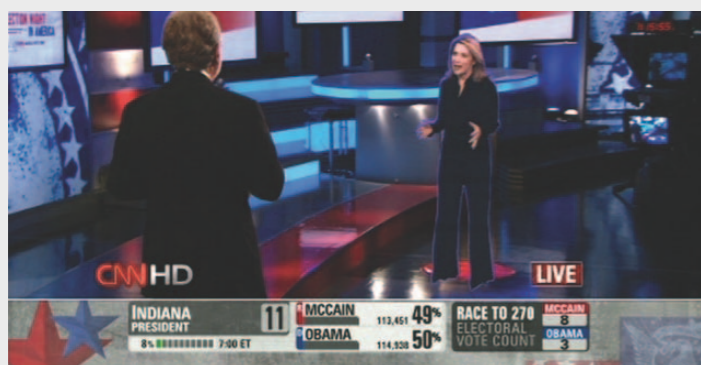
The CNN Hologram –
2008 U.S. Presidential Elections

KEY FEATURES

- Extremely powerful real-time rendering engine

- 2D and 3D real-time high-quality graphics with live video inputs and fill + key outputs

- Supports SD digital video (PAL and NTSC in 4:3 and 16:9 ratios), HD digital video, as well as render to disk (AVI and Quicktime)

- Supports stereoscopic output

- High-quality full scene anti-aliasing

- Open interface allows third party applications to control the graphics with ease

- Powerful Plug-in API available

- Pure OpenGL implementation

- Full support of OpenGL Shader Language for custom shader creation

- Supports timeline-based audio playback

- Optional video board to support live video inputs and clip playback

- Internal chroma-keyer

- Optional plug-in packages available

- Real-time IP streaming

Viz Artist™

Create real-time 3D graphics

Viz Artist covers all areas of today's broadcast graphics. It enables designers to build complete virtual sets as well as complex 3D animations. It even makes bread-and-butter tasks, such as building geometry and creating fonts for lower third graphics, more efficient.

✓ Real-time 3D modeling and animation tool

✓ Built-in spline editor for full animation control

✓ Efficient file-handling and data consistency

VIZ ARTIST creates innovative scenes, compelling graphics, and stunning animations: It releases designers from repetitive standard tasks and gives them complete freedom to concentrate on the creative side of their work.

VIDEO. Viz Artist 3 fully supports video as part of the creation process. Videos can be used as parts of a scene, or as textures mapped onto geometry using UVW coordinates.
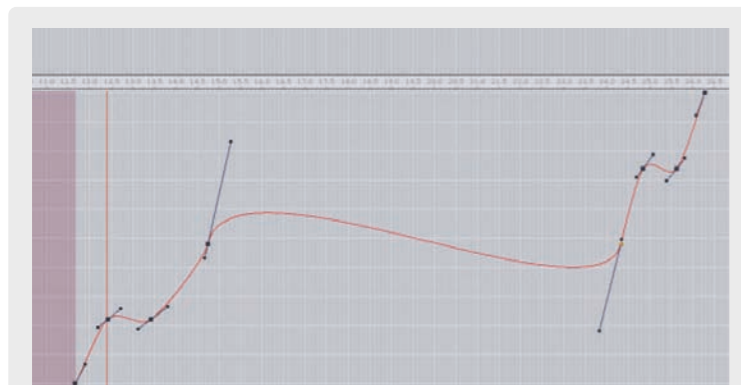
The built-in spline editor allows users to fully control every aspect of an animation.

SPLINES. Parameters can be adjusted either by their keyframe values or with the attached handles.

DIRECTORS. Controlling animations has never been simpler: directors control animations on the timeline. They can be split and merged and even grouped hierarchically. A clear representation of complex animations is provided.

VIZ GRAPHIC HUB SERVER. Viz Artist 3 comes with an integrated multi-user database that serves as the central point for storing all assets. This asset management database provides efficient and secure file handling.

GUARANTEED DATA CONSISTENCY. All objects keep track of their references under all circumstances.

They stay consistent even when they are copied or moved. This means that changes in an object will always affect all connected scenes. Company-wide changes in style, such as new fonts or logos can be accomplished by editing a single element.

ORGANIZING FUNCTIONALITY. Viz Artist offers great flexibility when it comes to organizing references. Scenes, including all their relevant references, can be arranged in different projects. Complex scenes often contain many image, object, clip, and font references. These references are registered in Viz Graphic Hub and can be easily searched for using any of their properties. All elements necessary for handling complex designs are accessible from one place.

KEY FEATURES

- User-friendly and effective real-time 3D modelling and animation tool
- Full support for maps and video
- Full real-time rendering of models from 3rd party applications like Maya™ and Softimage|xsi™
- Pre-rendering of scenes for future playback
- Hardware 2D DVE as well as software 3D DVE
- Advanced font style handling
- Built-in spline editor for full control over animation at any given time
- Full support for undo/redo functionality
- Supports shortcuts for all common tasks
- Integration with asset management database for efficient file-handling and data consistency
- Supports Viz Graphic Hub with extended search functionality: all object properties can serve as search criteria
- Software Development Kit available
- Optional Shader plug-ins available

SUPPORT FOR STEREOSCOPY.

For designers the transition from creating graphics for 2D playout to stereoscopic playout can be a challenge. With its integrated support for true stereoscopic preview on the same machine, artists can now instantly see how their design translates into 3D space and adjust it accordingly. It's no longer necessary to render elements out and check them on another screen before playout.

Every Viz Artist 3 installation offers a wide variety of different parametric objects.
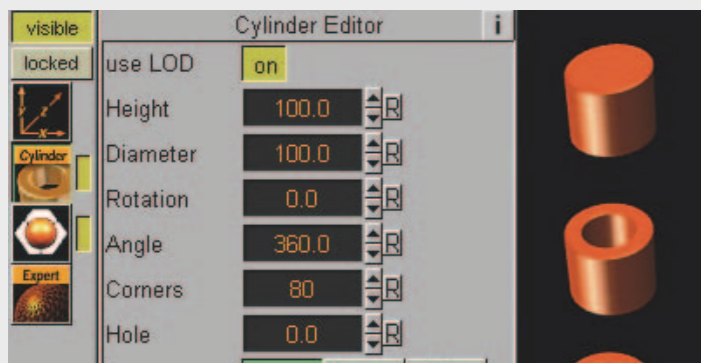

Every Viz Artist 3 installation offers a wide variety of different parametric objects.

OBJECTS AND GEOMETRY. The selection contains 2D objects and simple 3D objects that can be used to create more complex 3D models.

EDITING 3D OBJECTS. Each parametric object has a set of free variables that allows designers to alter the object's features in various ways. For a cylinder, for example, the editable features would include bevel size, radius, and internal-hole radius. All variable changes can be animated and controlled externally .
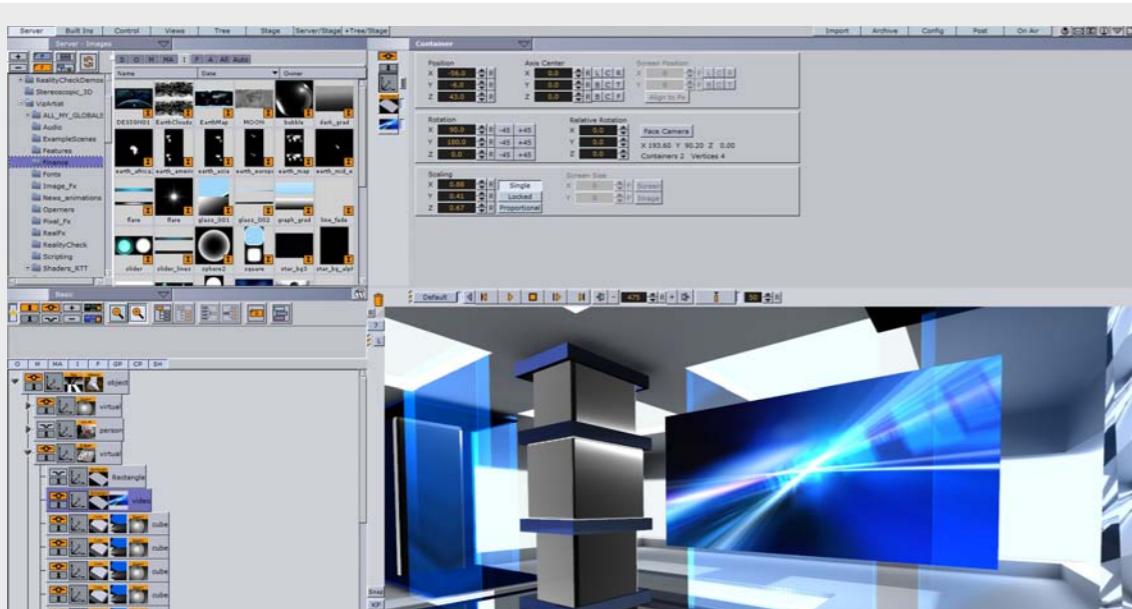
BUILT-IN INTERACTIVITY. Viz Artist 3 features advanced control and interactivity options. The application comes with its own powerful scripting language, closely resembling Visual Basic in structure and syntax. The scripting language allows designers to integrate interactivity and custom logic easily into a scene. It only takes a few lines of code to create interactive elements such as click buttons or support for touchscreens.
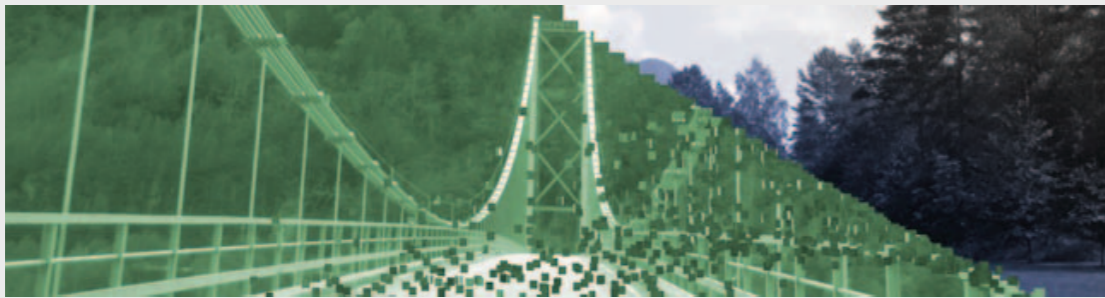
VIZ PIXEL FX PLUG-INS are based on advanced shader technology, offering designers color correction and video manipulation in Viz Artist on a level that up now demanded third-party applications.

Viz Artist provides all the tools needed to create real-time 3D virtual environments.

VIZ ARTIST 3 comes with a variety of built-in functions that enable the user to easily manipulate different object and function properties. The functions can be addressed from scripts, which can then be compiled and saved as plug-ins. These plug-ins can easily be used in further scenes and shared with other users.

OPEN FOR OTHER FORMATS. Viz Artist 3 has the ability to import models from other 3D packages. Viz Artist 3 can import files from all major 3D packages, such as Maya, 3DS Max, Lightwave, Softimage, and many others. It accepts the majority of these formats' geometry parameters, such as reference to textures, texture mapping coordinates, smoothing groups, materials, and lighting.

Reconstructing the spirits of the past

Sir Donald Campbell captured before his tragic death in 1967 – televised and now part of British television history.

When Sky News set out to bring an old legend back to life last Christmas, Viz Artist played an extremely important part.

THE SKY NEWS CREATIVE TEAM.
Aaron and Phil are both Visual Effects Artists in the 3D VFX Team managed by Brent Jones. Aaron started his career as a Graphic Designer at ITV. Phil studied Computer Aided Product Design.

SKY NEWS. A 24-hour based domestic and international satellite television news broadcaster with an emphasis on UK and international news stories. Its relations with Vizrt stretches way back. Today, Sky News it is one of Vizrt's biggest and most important customers.

"Will the Bluebird ever be allowed to fly again?" asked a British newspaper as an underwater team lifted the wreckage of Sir Donald Campbell's legendary jet-powered speedboat from the bottom of Coniston Water in England some ten years ago.

The moment of Sir Donald's death back in 1967 is considered some of Britain's most precious television history, still etched in the memory of everyone who witnessed their national hero roaring across the water – in blurry black and white – at more than 320mph. Tragically, Campbell died that day – failing to set a world record. In a matter of seconds, the front end lifted clear of the water and the speedboat did a spectacular back flip, crashing into the water in a huge cloud of spray.

Much has happened since, both on television and in the world of speed boats. Some 45 years down the road, the public didn't have to wait for the restorers to put all the pieces back together in order to once again admire the iconic craft in action. Thanks to a team from Sky News's creative department, the hydroplane has already been brought back to life, speeding across millions of TV-screens last December.

The remarkable story of the Bluebird's phoenix-like rebirth was chronicled in a television documentary called 'Bluebird: The Spirit Reborn' broadcasted on Sky News and Sky News HD on Christmas Eve last year. The team used hi-tech 3D computer graphics, including Viz Artist, to recreate exactly what went wrong. The end-result is nothing short of amazing.

"

The graphic got an amazing reception from inside Sky and the audience watching at home."

Aaron Smillie / VFX Artist / Sky News

The brief – To create the world's most accurate high-end 3D reconstruction of the tragedy and to treat it with the respect and sensitivity it deserved.

Sky were given exclusive access to the Bluebird's undergoing restoration, and brought together the two most knowledgable experts on the subject (Bill Smith and Neil Sheppard). Based on their new findings and calculations, they visualized second by second what they believed to be the tragic last moments of both Bluebird K7 and Sir Donald Campbell's life.

Aaron Smillie and Phil Billmore (VFX Artists at Sky News) worked together on the project from research, modelling and animation through to final compositing. The project quickly became "a labour of love" for the entire team and they quickly realized how

they needed to work in order to solve their own piece of the puzzle.

"Real-time felt like the right technology for this type of project. The obvious benefit being that the experts involved in the crash could not only see in real-time the sequence from all camera angles but could also suggest changes as it evolved. Time with the experts was limited so using Viz Artist made for an extremely efficient workflow as their suggestions could be immediately implemented. Once they and the documentary producers were finally happy with the sequence, they could leave knowing, pretty much, what the final result was going to be", Aaron Smillie explains.

"We had very little reference material to start with because the original plans were not made available to us so we sourced scale replica model plans from the 60's. This enabled us to at least get started and it wasn't too long before we were given access to the workshop where the restoration is being carried out. It was amazing to actually see Bluebird for real and it gave us a fantastic opportunity to photograph and measure every piece to ensure that our computer model is the most accurate computer model of Bluebird K7 in the world."

Vizrt software was used in the animation and creation of the graphic and we also played it out live to the producers and experts to scrutinize. This was then rendered off as separate passes; reflections, water, boat and land and composited in After Effects, with Aaron going to great lengths adding the finishing touches, such as glows, more water and even droplets on the lens.

According to Aaron, the response was overwhelming. "The graphic got an amazing reception from inside Sky and the audience watching at home. It will also be going out on the History Channel in a few months".

See the end-result, plus the old TV-footage from 1967, by visiting vizrt.com/casestudies. To see more on the actual Bluebird K7 restoration go to bluebirdproject.com

Viz Trio™

More than a Character Generator

Broadcasters are always looking for the best solution to get graphics on air as effectively and quickly as possible. Viz Trio provides a solution to get the highest quality graphics on air for your broadcast with the least amount of effort.

- ✓ Integration with all major newsroom systems

- ✓ Manual or automation driven playlist control

- ✓ True real-time 3D graphics

VIZ TRIO is the number one character generator (CG) for live televised events anywhere on the globe.

IT'S THE SYSTEM'S FLEXIBILITY and the high level of built-in intelligence that sets it apart. Forget about the limitations of traditional CGs and work instead with an intelligent application that exceeds your expectations. Viz Trio is a system that delivers more than you thought was possible and may perhaps even inspire you and your designers to try something completely new.

A FEATURE RICH 3D DESIGN SYSTEM. In addition to basic CG functionality, a set of advanced features supply the operator with complex graphical and operational

possibilities. Viz Trio supports, amongst other features, connectivity to multiple newsroom systems, seamless context switching on graphics, Look-Ahead Transition Logic™, multiple clients controlling a single output channel, and integration with non-linear editing systems.


Absa Premiership Soccer
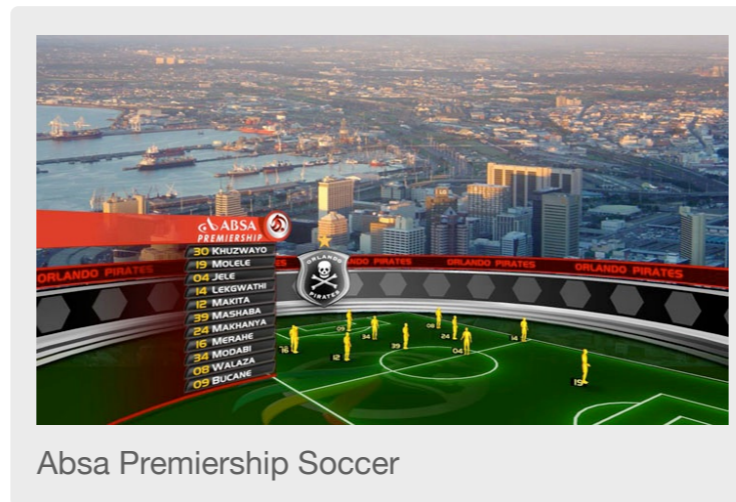
ALL GOOD THINGS comes in three. As its name suggests, Viz Trio it is often used as a combination of three

products. With the Viz Trio client you control the video output and make changes to your content, whenever needed. Then there is the Viz Engine, which is a real-time 3D rendering software that delivers animations in HD SDI video or as a DVI digital output. Finally, there is Viz Artist, which is an animation and visual effects creation tool.

TV PRODUCERS often faces the challenge of how to present the same news or sports results cost-effectively across various channels or even for different shows on the same channel. Viz Trio's template variants make it possible to deliver several different graphics streams from a single CG and a single set of data.

KEY FEATURES

- Runs on a rack mountable PCs as well as standard desktop PCs

- True real-time 3D graphics

- Look-Ahead Transition Logic™ enables seamless automatic transitions between graphics (no need for mix off/on)

- Integration with the leading non-linear editing (NLE) systems from Adobe, Apple, Avid and Quantel

- Supports all major SD and HD formats

- Advanced multi-layer logic reduces number of pages needed for composite graphical elements

- Real-time video output with adjustable video buffering

- Maps integration for adding high-resolution custom maps with style definitions, and real-time animations and hierarchical zoom from globe to street-level

- Integration with all major newsroom systems

Viz Trio user interface
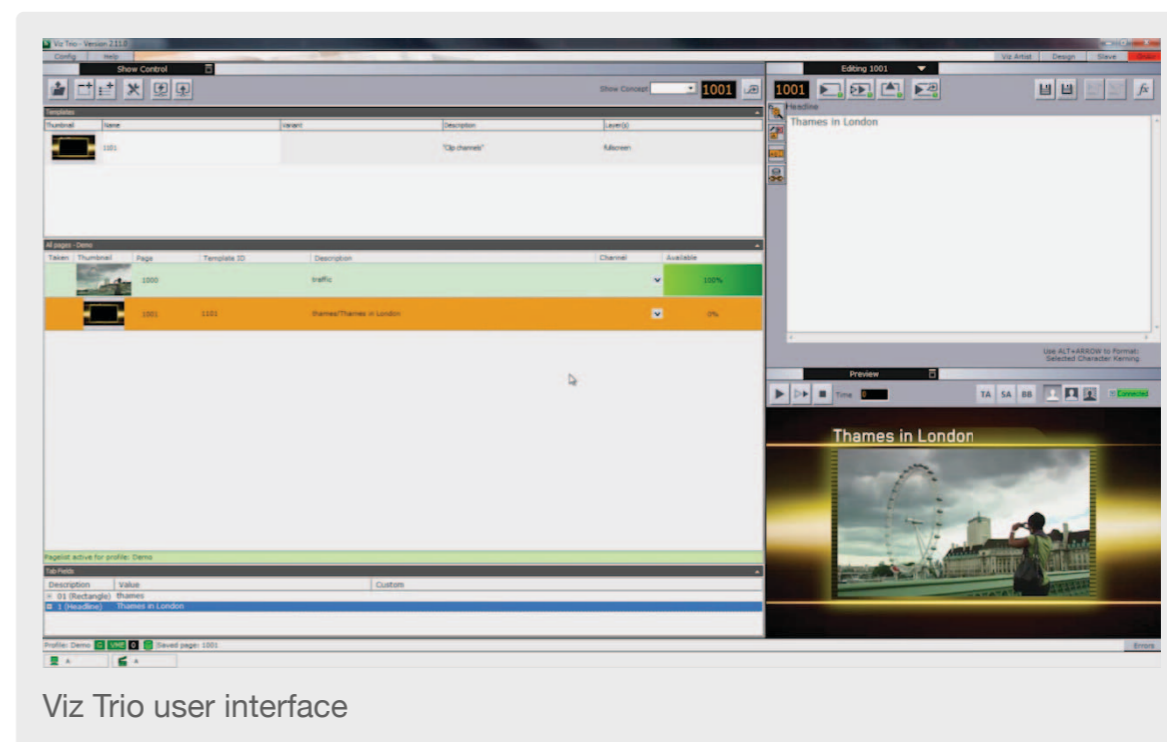
MULTIPLE CLIENTS ON ONE OUTPUT CHANNEL. Multiple Viz Trio clients can prepare graphics simultaneously without tying up the on-air graphics channel during the preparation process. Further, during play out, multiple clients can operate one output channel.

Viz Trio includes a simple built-in macro language that designers can use to customize further the way graphics are

rendered. Ready-made examples are available at all stages for a huge variety of functions. Viz Trio is not just a pre configured application – its behavior can be customized to your workflow needs.

NFL

LOOK-AHEAD TRANSITION LOGIC is unique to Vizrt. It makes sure that for any new page taken to air, the system automatically performs optimal transitions between existing

and new graphics elements. Graphics elements intended to be on the screen at the same time are put in different logical layers. The concept of independent layers makes it possible to put on air any combination of graphics and still control them independently of each other.

VISUAL DATA TOOLS. Viz Trio supports Viz Artist's Visual Data Tools plug-ins for showing information such as bars, graphs, lines, pies, scatters or stocks. Charts can be edited in the same way as common spreadsheets. As Viz Trio supports the ADO interface, it is also possible to connect to any database or spreadsheet for fetching data.

NEWSROOM INTEGRATION. Apart from integrating with other Vizrt systems, Viz Trio also integrates with major newsroom systems, automation systems, general purpose interfaces and non-linear editing system.

IT'S ALL IN A BOX. You need the full functionality of Viz Trio, but don't have the space to spare? Then simply run Viz Trio on a single PC! With a single PC setup you get all the features of a regular Viz Trio with having two graphics card in the same machine. The Viz Trio client that is used for organizing playlists, controlling the video output and making fast changes to content, and the Viz Engine for rendering the graphics both run on the same hardware, with no significant effect on rendering performance. In fact, with two graphics cards on board the setup not only saves space, costs and simplifies setup and maintenance; it even allows for a full local preview directly on the Viz Trio. It is the perfect CG for OB vans and all locations where rack space is limited.

DIVE INTO SOCIAL MEDIA. New media such as social networks are becoming a powerful way for media houses to interact with their viewers on a personal level. Viewers can comment and interact with the broadcasters in a real time way. Viz Trio can take feeds from social media such as Twitter and Foursquare and then parse and display the messages as they happen. Meta data can also be acquired for the automated creation of maps for the viewers location.

Gray Television Builds New Technology Strategy with Vizrt

As the nation's largest owner of stations in mid-size markets, Gray Television Group dominates broadcasting across Middle America. With 36 diverse affiliates spread throughout college towns and state capitols, Gray VP of Technology Jim Ocon recognized his company's crucial need to establish a common cost-effective, automated workflow across all its stations. To meet this challenge, Ocon established a new technology strategy he calls the Gray Model.

" *When we're relaunching our stations, we don't have the luxury of a six- or nine-month launch period. We're looking to get it down to twelve weeks or less. So having a powerful but simplified graphics package we can rely upon is key."*

Jim Ocon / VP of Technology / Gray

A NEW MODEL. With the system already operational in 19 of the affiliates, Gray is rolling out this new model to additional stations every quarter. Fully integrated with existing workflows and automation processes, it has allowed Gray to quickly implement a centralized hub of resources and technology with a single graphics solution across its entire network.

ADDING FLEXIBILITY WITH A MODULAR STRATEGY. As the cornerstone of Gray's new technology, Ocon chose a MOS solution based around the Viz Engine™, Vizrt's powerful and flexible graphics renderer. Gray''s automated production control and master control rooms also incorporate Viz Artist

animation and design software, automation-driven Viz Trio for character generation, Viz Content Pilot for content management, Viz Ticker for news ticker creation, and Viz Multichannel for channel branding automated graphics playout.

Ocon said, "What really separated Vizrt from the competition is the ubiquitous use of their hardware. We can take Viz engines and plug them in anywhere in the studio and the station. With other systems, the ticker system might be a different box with different inputs. With Vizrt, we can use the same engine for everything just by configuring it a little differently. This IP-flexibility is inherent inside Vizrt products, and one of the main reasons we selected them."

"A basic Vizrt system includes an Engine, which is the graphics renderer, and a Trio, which is the operator console/interface. You use a combination of Engines and Trios to run your graphics. It's very modular, so if there's ever a technical problem and you lose your main engine, you can literally patch in one of your engines from another part of your system

to do your graphics. Vizrt gives our stations tremendous flexibility."

Chroma keyed set with template background

CREATING A CENTRALIZED HUB MODEL. Traditionally, station graphics production has used separate artists to render and operators to manage the graphics, with each station having its own dedicated staff. Employing Vizrt's products within the Gray Model enables the broadcaster to create a

more efficient central hub, while also giving their stations autonomy and control over their work. Ocon has used Gray's Omaha station WOWT as his pilot site for much of the system testing and development that Gray then deploys to the other stations throughout the network.

Vic Richards, Director of Promotion and Media Production at WOWT explained the hub strategy: "We have three artists who work on Vizrt packages, creating graphic templates for all of the stations. Each template has a similar functionality and look. Our stations use these templates on a daily basis simply by filling them in. Because the basic design is already approved, the graphics just need to be checked locally for content, to make

sure everything is spelled correctly." Not only is it easier for the stations to achieve consistency within each broadcast, but the graphics are also consistent with the other affiliates in the network to better reinforce the Gray brand.

EVOLVING A MORE STREAMLINED WORKFLOW. Richards said this hub strategy has made dramatic changes in the newsroom, studio production and automation -- not just in workflows, but in staff assignments as well. "In a traditional system, an artist takes requests from the newsroom, and physically builds the graphics. During the newscast, the CG operator advances them. Now, control of graphics production is actually in the hands of the newsroom staff, which

builds its own graphics using the templates. Then the Ross OverDrive automation system triggers the graphics during the newscast, essentially taking the place of the CG operator. Everything"s rendered in the graphics card, on the fly, the moment it hits the air. Vizrt allows one person to do everything."

Mike Fass, WOWT's Media Production Manager, noted another advantage of the Vizrt system. "The graphics templates are vector-based," said Fass. "They're very small in file size, unlike, say, a QuickTime movie file. So one of our artists can modify a graphic and simply email it to the station. We're not using hours of upload time, or lots of bandwidth. And because Viz Engines don't store graphics with page numbers

like a traditional system, they don't have to store large graphics files at the station itself. "

REDUCING THE LEARNING CURVE. One of Ocon's major concerns is ensuring that his stations are properly trained on the new system. When an affiliate upgrades to the Vizrt system, Gray designates a technician at that station for three days of Vizrt training as a "superuser."

Two additional days of training for production and news users teach them to fill out the graphics templates. Richards noted, "We've found that the five day program is really all each station requires. And now that we're about three years into bringing the stations on line, we're having more

Weather information is pulled from a gSync XML feed automatically

people at the stations with superuser skills. So we're using those people as additional support for other stations."

GIVING SMALLER STATIONS A "BIG STATION" LOOK. The hub strategy has greatly reduced the redundancy of effort at Gray Television Group. Ocon explained, "We can focus our best talents in the network at creating the

GRAY CONTROL ROOM LAYOUT. Using the Ross OverDrave Automation system, graphics are triggered in the newscast. Ross sends commands to the Media sequencer to trigger the needed graphics. The Director never sees a Trio playlist

template packages, customized for any station in any market. Stations don't need to have someone on site to create those daily graphics, just someone who can populate the template and then get them to air. So, that really helps their workflow. Once they're comfortable using the technology, the templates have the flexibility to let them stretch their wings a little bit creatively." This means that even the smallest stations in the Gray network can employ graphics that are as sophisticated as those at the larger stations. Ocon said, "That's one of the biggest things we get feedback on. A Grand Junction can look like a Knoxville. And our viewers are very impressed."

FOX Sports takes Vizrt technology under the hood at Daytona 500

Considered one of the most prestigious races on the NASCAR calendar, the Daytona 500 is held annually at the Daytona International Speedway, Daytona Beach, FL.

"

We wanted to make a unique visual difference, and Vizrt has helped us achieve this. We believe the Viz Artist authoring software, along with its real time 3D rendering, helped create one of the most unique analysis tools ever used in sports broadcasting."

Zac Fields / Director of Graphics / Fox Sports

For this year's race, FOX Sports used four Viz Trio template-based, real-time 3D character generators (CG) paired with four Viz Engine 3D rendering engines for real-time compositing of graphics and video. The Viz Engines were used to generate live graphics including lower thirds, over the shoulders, full screens and the FOXBOX crawl driven by real-time data of the running order of the drivers.

The main set, dubbed the Hollywood Hotel, featured the Ford Tech Center, an interactive display that leveraged a Viz Trio/Viz Engine combination feeding video and graphics to a 55-inch Perceptive Pixel touch screen. NASCAR on Fox Announcer Jeff Hammond used the touch screen to explain the innovative technology and 3D car parts behind NASCAR vehicles. The Vizrt scene included over 2 million polygons running in real time on an Nvidia Quadro 6000 graphics card.

Step up to a file-based content workflow

Viz Content Pilot offers the optimal environment to create, manage, and deliver high volumes of top-quality content. It supports live and taped news, sports, election, and other broadcast productions.

✓ Template-driven graphics and video management

✓ Advanced integration with all major newsroom systems

✓ Customizable real-time playlist
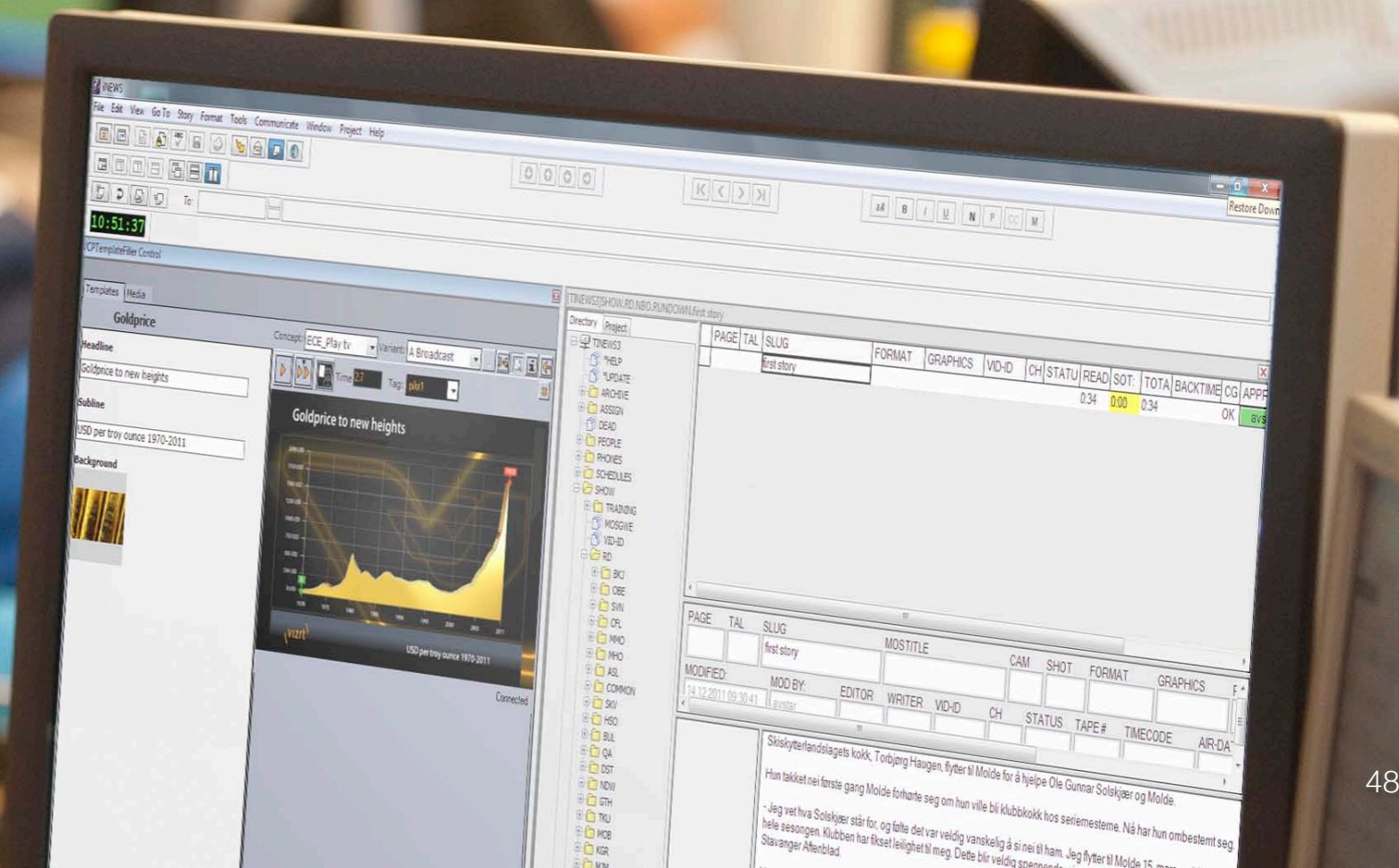
VIZ CONTENT PILOT allows journalists and producers to add graphics elements to their stories through a simple fill-in-form interface. It offers a complete overview of the graphics rundown and integrates with all the major newsroom systems.**BROADCASTERS WORLDWIDE** use Viz Content Pilot, from major TV networks to local TV stations. Because Viz Content Pilot is not limited to broadcast productions, it can deliver graphics content to all types of graphics displays and is also used as the core control component in a Viz Virtual Studio setup. Viz Content Pilot can serve as the core content control system for all users that require speed, a consistent look, and a streamlined workflow for their graphics.

CREATE, MANAGE, AND DELIVER high volumes of top-quality content with Viz Content Pilot. It supports live and taped news, sports, election, and other broadcast productions.

By using a variety of template forms, the editorial staff can enter new data, images or videos in pre-defined graphic animations, and preview the result instantaneously.

Therefore, day-to-day content creation can be totally independent from the design department.

PLAYLIST MANAGEMENT. Viz Content Pilot includes a powerful multi-user playlist with real-time updates allowing multiple producers to update the playlist simultaneously. The playlist can also be automatically synchronized with a variety of applications, such as newsroom systems or Viz Trio.

Viz Content Pilot includes full support for Vizrt's Look-Ahead Transition Logic™. Transitions between graphics are triggered automatically using a single video output channel. This enables seamless and automatic transitions between multiple layers of graphics.

NEWSROOM INTEGRATION. Viz Content Pilot easily integrates into the editorial workflow, as its templates can be accessed by any major newsroom system. The Newsroom Connect Component is a small, but advanced, graphics editing tool that is bundled with Viz Content Pilot and installed on your newsroom system client machines.

KEY FEATURES

- Support for concept and variant-enabled playlists
- Advanced newsroom integration with all major newsroom systems
- Integration with all major automation systems
- Integration of a maps system for adding high resolution custom maps with style definitions
- Full integration of video in graphics during template design, template filling, and play out
- Access to previews in real-time or as snapshots
- Template-driven graphics with a completely customizable interface
- Built-in macro commands and scripting logic
- Customizable real-time playlist with snapshot icons of templates and videos
- Runs on top of a powerful enterprise level Oracle database that supports up to 100,000 users

It enables journalists to add images, text, videos, and maps, and to select the graphics concept and variant.

It also supports a real-time preview and snapshots. For time-critical situations, the Quick CG command line tool allows the user to create graphics with text on the fly.

TEMPLATES WITH CUSTOM APPLICATIONS. Template designers can create small applications, using drag-and-drop operations, scripts, and macro commands in Viz Content Pilot. These applications can access and process external data, and trigger any kind of custom logic. With good usability design, designers can create templates that exactly fit the needs of journalists.

BY LINKING GRAPHICS AND VIDEO workflows, Vizrt extends the capabilities of its graphics systems, including the Viz Content Pilot. With our broadcast graphics solutions video, high-quality graphics, production tools, and media asset management work together in one integrated environment.

THE JOURNALIST can access a shared database of video clips and stills from the newsroom. By enabling Viz Content Pilot with Vizrt's video and graphics link and combining it with Viz Media Engine, it is possible to add video to graphics from the newsroom. Using Viz EasyCut or Viz PreCut, journalists can edit video clips, save them, and then add them to the story, either as video or as video in graphics from their desktop PCs in the newsroom. For last-minute editing, video clips, images, and text can also be edited by the Viz Content Pilot operator.

NON-LINEAR VIDEO EDITING INTEGRATION. With the Viz NLE plug-in, graphics templates can be used within the non-linear editing system without any modifications.

All the standard Viz Content Pilot controls and features are available within the non-linear editing system. The plug-in window includes a real-time preview of the graphics, including full length animation. Once the template is validated, the graphics will be rendered into the timeline.

Viz Content Pilot supports amongst others the NLE systems by Avid and Quantel, as well as Apple's Final Cut Pro.

DIVE INTO SOCIAL MEDIA. New media such as social networks are becoming a powerful way for media houses to interact with their viewers on a personal level. Viewers can comment and interact with the broadcasters in a real time way. Viz Trio can take feeds from social media such as Twitter and Foursquare and then parse and display the messages as they happen. Meta data can also be acquired for the automated creation of maps for the viewers location.
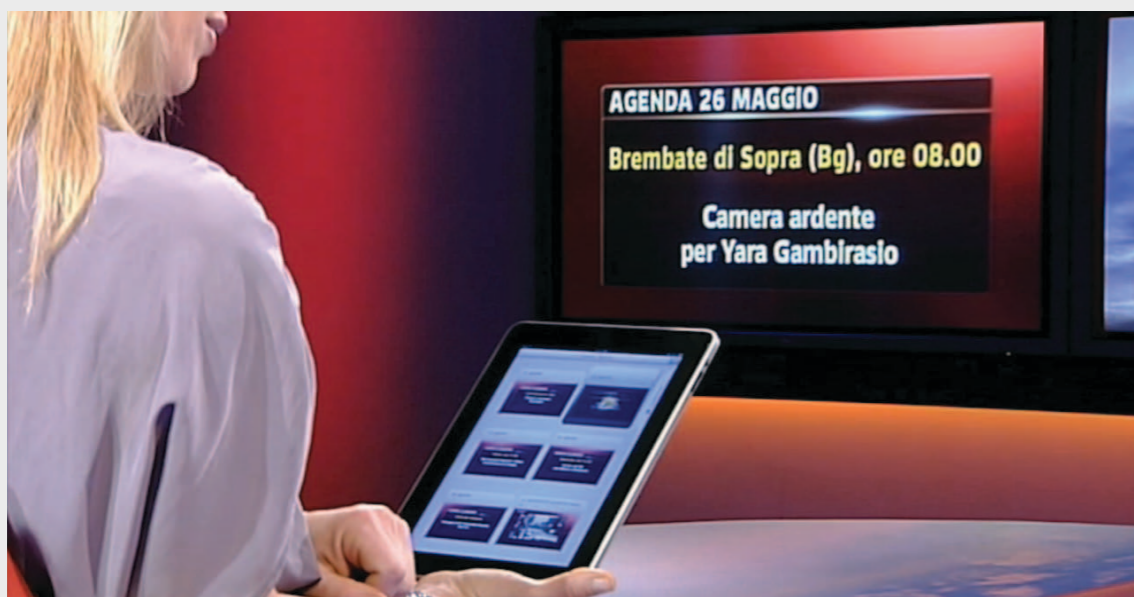
Viz Anchor™

A new star in the studio

Viz Anchor is a Vizrt app targeted at news, sports and weather presenters in the studio. It allows users to control newsroom playlists, including video and graphics, directly from the iPad.

✓ Control graphics from the palm of your hand

✓ Present content in a compelling way

✓ Available on the App Store

Available on the App Store
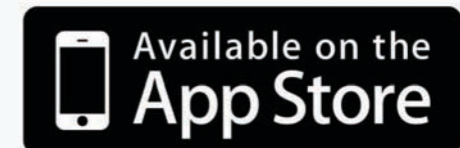
Viz Anchor used by Sky Italia

VIZ ANCHOR allows you to CONTROL GRAPHICS from the palm of your hand. Our award-winning control app empowers your on-air talent to do what they do best: present content in a compelling way, free from a range of common newsroom restrictions. It provides a subset of the functionality of Vizrt's other control applications, such as Viz Content Pilot and Viz Trio, enabling the presenter to have an updated version of the playlist available in the palm of his or her hand – without going through the control room.

SEAMLESS INTEGRATION. Viz Anchor integrates seamlessly with existing Vizrt workflows. Once the latest run-down is updated, the presenter may easily run graphics directly on-air, or for instance start and stop animations on a video wall controlled by Viz Video Wall ER. Video clips and graphics scenes can be controlled remotely from anywhere in the studio. This allows for a more dynamic presentation with a smooth and organic flow.

Viz Anchor fits perfectly into a sports broadcast where the presenter wants to bring up relevant data during the half time analysis. It adds excitement to any electoral coverage, or adds a bit of thunder to your daily weather forecast. A number of real-time scenarios fetched by the anchor is all you need to make the presenter look innovative and creative. By bringing the number one trending tablet into the studio, you're simultaneously expanding the boundaries of newsroom television.

KEY FEATURES

- Playout of graphics added to newsroom stories runs natively on Apple's iPad using the MOS protocol

- Playout of context-enabled playlists and shows

- Playout of Transition Logic graphics (without context)

- Provide a snapshot preview of the scene in the playlist

- Connect to and use any Viz Media Sequencer Engine with a profile and supported playlist type

- Configurable playlist operations

- Support for RGBA (key and fill) versions of the preview thumbnails

- View and send logs directly to Vizrt

MORE INTERACTION. Being an iPad app, Viz Anchor features an intuitive touch-based interface. Through the device's wireless connection, changes in the play list can easily be fetched by the presenter. Simply tap a finger in order to get the latest play list at your disposal. Another double-tap will run any selected set of graphics.

ADD A NEW DIMENSION TO YOUR STORYTELLING. There are no limitations as to what type of graphics you can control. It can be your typical CG (character generator) graphics, graphics on your video wall, your virtual set, or immersive graphics. At a crucial time of segmentation within the TV industry, add a new dimension to your storytelling with Viz Anchor.

Viz Video Wall ER™

Shift your video wall into overdrive

There are practically no limits to what you can do with Viz Video Wall ER. Resolution, wall size or layout – we support it.

- ✓ Virtually unlimited resolution
- ✓ Unlimited wall size
- ✓ Run graphics and live video on one video wall
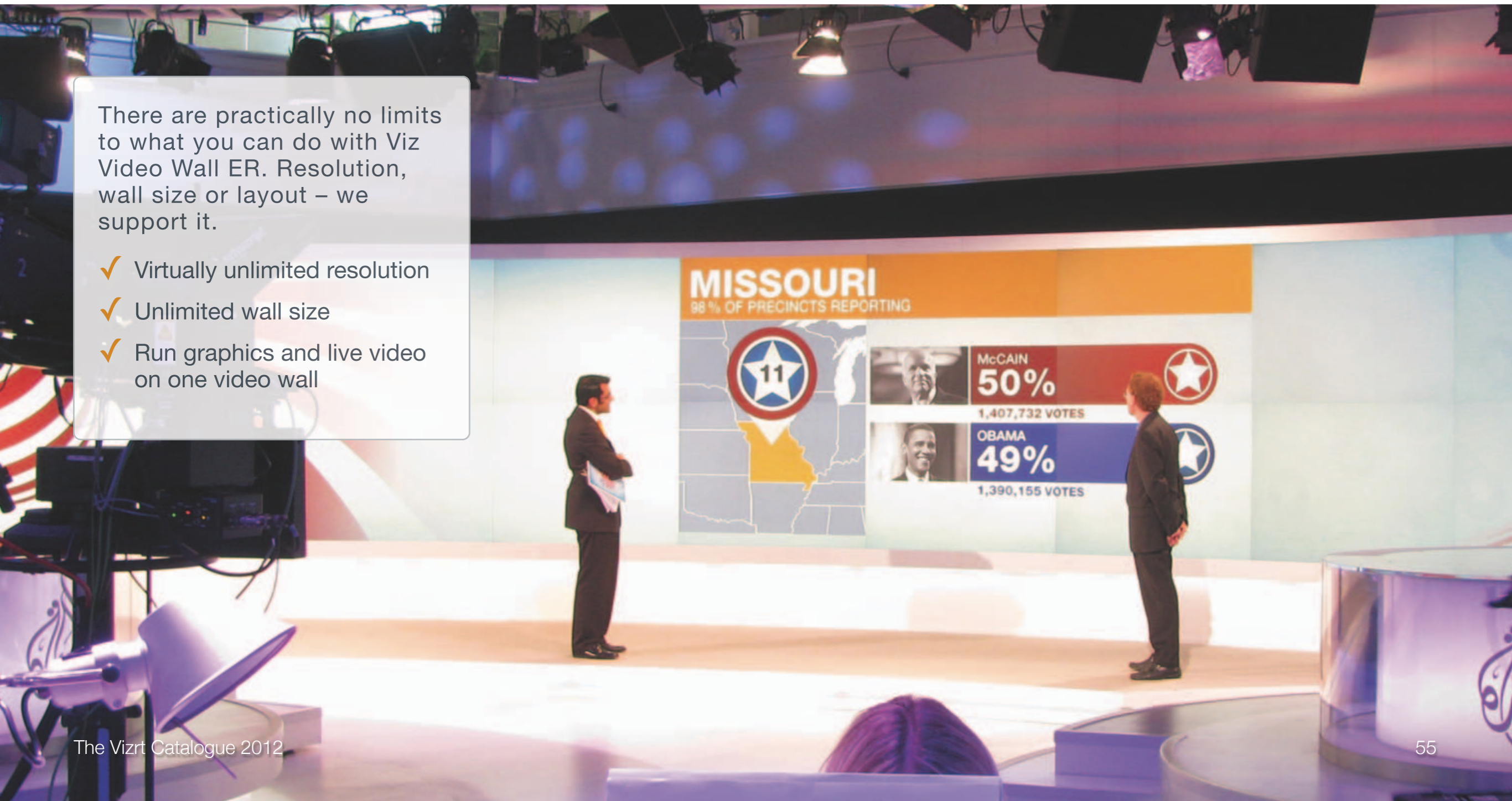
laSexta using Viz Video Wall ER for news and sports

ORF using Viz Video Wall ER for set background immersion

Sky Italia controling Viz Video Wall ER scenes live through touch-interactive screens

VIZ VIDEO WALL ER enables you to create unique installations that surround the viewer and go far beyond the capacity of traditional video-wall setups. Viz Video Wall ER has a wide range of purposes in addition to regular studio broadcasting: It is perfectly suited to entertainment and educational productions, as well as interactivity in live broadcasting.

Viz Video Wall ER can even be used in outdoor environments. The solution integrates seamlessly with other Vizrt solutions without requiring changes in the workflow.

EASE OF USE. Moving from a traditional way of displaying content towards Viz Video Wall ER technology is simple. Adopting the new technology is intuitive for both administrators and

users, and the solution is cost-effective and future-proof for the organization.

CONTINUITY. Even though your output changes dramatically, internal routines remain the same. Viz Video Wall ER seamlessly integrates with established workflows. Designers, journalists and control room operators can concentrate on what they do best.

KEY FEATURES

- Virtually unlimited resolution

- Unlimited wall size

- Run graphics and live video on one video wall

- No workflow changes

- Control graphics from Viz Trio and Viz Content Pilot

- Uncompressed output from Viz Engine

- Asymmetrical splitting of rendering load with two or more Viz Engines

- Ease of use due to several animation layers

- DVI and SDI video output

FLEXIBILITY. Viz Video Wall ER is designed for scalability. Broadcasters can start out small-scale, then expand when they feel it's time. A basic installation includes two Viz Engines, which includes all the benefits of a full installation. Such a setup produces quality output over any number of screens.

QUALITY ENHANCEMENT. If the need for more power and higher resolution arises, the installation can easily be upgraded. Every additional engine increases the graphics capabilities so that virtually unlimited resolutions and wall sizes can be achieved. The workflow for the operator remains the same, no matter how many engines are being used.

When two or more Viz Engines are used in tandem, the rendering load can be split asymmetrically. This means that the resolution of one area of the screen can be higher than another area. This is particularly useful when the camera is taking a close-up and parts of the screen are shown in detail, which requires a higher resolution display. With Viz Video Wall ER, pixelated low-quality images are a thing of the past.

INTEGRATION. Viz Video Wall ER can easily be integrated into existing Vizrt solutions. It is possible to create powerful 3D effects with Viz Artist that take the impact of video walls to a whole new level.

Viz Multichannel™

# Complex channel branding made simple

Viz Multichannel makes it easy to utilize high-quality Vizrt graphics for channel branding. The application simplifies the playout of playlists, providing a single client that handles the playlist elements of one or multiple channels.

✓ Automation for unlimited number of channels

✓ Advanced support for promotions and branding

✓ All channels monitored from a single point

VIZ MULTICHANNEL helps to promote commercial messages on multiple channels in a fully automated way. It combines pre-scheduled, time code based playlist operations with the possibility of adding real-time 2D and 3D graphic effects and powerful branding capabilities. In complex environments the application helps to centralize the entire workflow onto one desktop.

INTEGRATION WITH THE WORKFLOW. Viz Multichannel integrates seamlessly with existing channel traffic and scheduling solutions. It supports the import of playlists from all major traffic and automation systems.

SUPPORT FOR AUTOMATION SYSTEMS. Viz Multichannel's integration with the automation system guarantees that every single element is played out at exactly the right time. After receiving a playlist from the traffic system, the automation takes control during playout, telling Viz Multichannel when to run a specific item.

Viz Multichannel allows the operator to preview events and edit them if needed before they hit air.
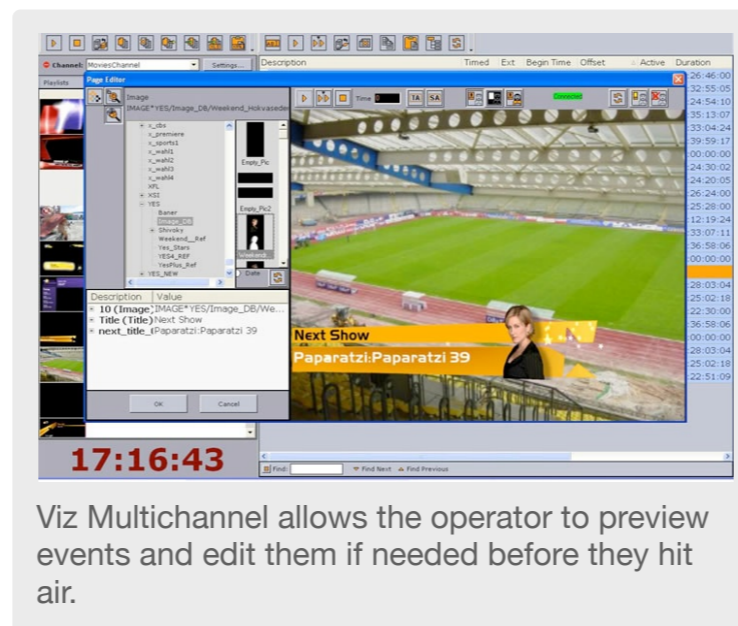
Last-minute changes – made in the automation system – will automatically be synchronized with the playlist in Viz Multichannel. This means that the solution as a whole always reflects the latest status, regardless of when a playlist is changed.

EVENT HANDLING. While shows or ad-blocks are considered primary events, the graphics effects within the show, like squeezebacks, tickers and lower thirds, are seen as secondary events. After a primary event has been triggered by the automation system, Viz Multichannel takes control of the secondary events and plays them without the need for user intervention, this way guaranteeing accurate timing.

Optionally, secondary events can also be triggered by the automation system.

Viz Multichannel's flexibility is based on relative time codes: Offsets are based on the time code of a specific program rather than on an absolute time of day. Because the relative start point of a template in relation to the main program always stays the same, updates in the playlist do not affect the graphics schedule.

The communication between Viz Multichannel and the automation system uses standard protocols like VDCP and Intelligent Interface and is open to other third party systems.

ADJUSTING THE PLAYLIST. Last-minute changes to existing playlists are very common in broadcasting. Whether
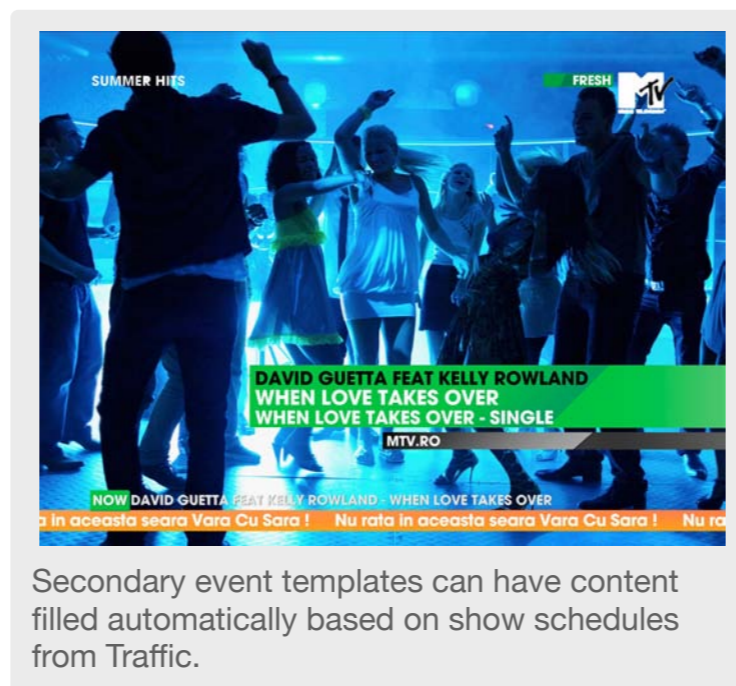
Secondary event templates can have content filled automatically based on show schedules from Traffic.

sports events go overtime or breaking news demands its own space in the playlist, Viz Multichannel handles time-critical changes without the need for user interference.

STAYING IN CONTROL. Viz Multichannel allows users to maintain full control over the playlist up to the very last

minute before playout. Templates automatically collect information such as the program's name and start time. Should any changes occur, all relevant information is updated instantly.

An automatic error check makes sure that changes in the original playlist do not corrupt the graphics playlist. Advanced error protection features include alerts concerning overlapping animations, mismatches, or other deviations from the schedule.

TEMPLATES MAKE GRAPHICS accessible in next to no time. Vizrt's template system lets users create branded graphics with only a few clicks. Or even completely automatically if you prefer.

KEY FEATURES

- Hands-off workflow for graphic element creation, directly from the channel traffic system

- Advanced support for promotions and branding

- Automation for an unlimited number of channels

- Cutting-edge real-time 2D/3D graphics and DVE effects

- Supports all SD and HD formats

- Interfaces with all major automation solutions via GPI, Chyron Intelligent Interface, RS-232/242 and TCP/IP

- Multichannel elements can be triggered through the Vizrt REST API

- Supports playlist changes up to the very last minute

- One operator can monitor all channels from a single client

- Full preview functionality

- Automatic notification of traffic errors

- Automated billing and reports

- Runs on standard, rack-mountable PC hardware and laptops

BRANDING AND PROMOTIONS.
Viz Multichannel does much more than simply merge your promotion and branding strategy with the playlist. It also helps you to control and monitor the content.

Publish programming notes and updates automatically to social networks like Twitter and Facebook to keep the audience always informed about your stations broadcast schedule.

By Dale Dobson
Art Director for Corus Entertainment
in Toronto, Ontario, Canada

Corus Entertainment automates multichannel branding with Vizrt

Corus Entertainment's new Corus Quay Waterfront facility in Toronto was designed to handle the most demanding multichannel broadcast environment, including broadcast, broadband, and video on demand services.

> "
>
> *As you scale up to having many 24/7 broadcast channels, manually creating unique on-air branding graphics for each channel becomes cumbersome and challenging to do without errors or bottlenecks. Our automated Vizrt graphics software assumes the burden of this mundane, repetitive process for us."*

Dale Dobson / Art Director / Corus Entertainment

Corus Entertainment's new Corus Quay Waterfront facility in Toronto was designed to handle the most demanding multichannel broadcast environment, including broadcast, broadband, and video on demand services. As one of Canada's top media and entertainment companies, Corus Entertainment decided to move its headquarters to Corus Quay because our previous facility could no longer support the company's growth.

With close to 30 channels emanating from our network operations center, we rely heavily on broadcast automation systems for the scheduling and playout of these channels – including BXF-compliant PilatMedia for traffic, Omnibus iTX automation, and Artesia asset management.

WHY VIZRT? We wanted to take our automation to a new level and automate the creation of customized channel branding graphics for each of our channels.

After evaluating major market choices, we determined that only Vizrt had all the graphics components we needed; the tools to automate graphics creation tasks; and the ability to support an IP, file-based, BXF workflow.

Since we were breaking new ground, it was also critical that Vizrt offered its exceptional R&D services to write any additional plug-ins and API's needed to integrate its systems and third party products for seamless interoperability.

WHY AUTOMATE CHANNEL BRANDING?
As you scale up to having many 24/7 broadcast channels, manually creating unique on-air branding graphics for each channel becomes cumbersome or impossible, especially without errors or bottlenecks.

Our automated Vizrt graphics software assumes the burden of this mundane, repetitive process for us. Working in concert with our traffic and automation systems, our Vizrt systems automatically grab all the necessary scheduling information via BXF from traffic and program content from automation.

They also gather all the necessary video, audio, graphics templates, graphical elements, animations, and text files from the servers where they reside. Using pre-built graphics templates or clearly defined "scripting" instructions, they automatically pull all these assets together to generate and deliver the appropriate graphics for air.

WHAT IS THE WORKFLOW? While our broadcast traffic and automation systems handle some primary channel branding tasks, the volume, scope, and complexity of our channel branding requirements exceeded what those systems could handle. That's why we needed to develop and implement the Vizrt graphics automation solution.

The core of this file-based workflow interfaces two Viz Multichannel systems (primary plus backup) with our iTX and Pilat systems. Viz Media Engine stores and manages video content, while Viz Graphics Hub manages and stores all graphics. Along with the Viz Media Sequencer Engine and the Viz Graphics Deploy Agent, these systems work together to push graphics from central storage to one of

19 channels of Viz Engine for HD/SD rendering and playout.

Six Viz Artist design workstations and two Viz Trio character generators (CG) support template-based graphics creation, along with 36 Viz NLE plugins that tie Final Cut Pro and Quantel editing workstations into the workflow. These systems first went on-air in September 2009, and today a large part of our on-air channel branding efforts are fully automated.

WHAT GRAPHICS DO WE CREATE? YTV, W Network, Nickelodeon, CMT and Encore Avenue HD are among the channels that require promotional on-air graphics. The graphics inform viewers about the channel they're watching including: what program is

on now; what's coming up next at specific times; and what shows are scheduled in the same timeframe tomorrow.

On some of our channels we've automated the creation and display of full-screen trivia quiz graphics, with a question on top and the answer on the bottom. First only the question is shown, and then both question and answer are shown. Quiz questions are randomly selected for display and run at different times during the program. This would be difficult to do using a manual process.

The Viz Engine allows us to arrange graphical elements – such as channel bugs, lower third supers, closed caption bug, and the program rating

bug – onto a front, middle, or back layer so they don't conflict with each other when they effect on and off the screen. Graphics are scheduled to appear and disappear or stay up the entire time with precise timing because their rules are all timecode-based.

MAXIMIZING RESOURCES. Each channel we carry has its own distinctive look, including graphical backgrounds, fonts, color schemes, branding elements and design. One primary graphics template can service hundreds of secondary events as opposed to our graphics department having to create hundreds of graphics the way they once did.

Program information automatically populates the graphics templates and

changes to the main schedule through to related primary and secondary graphics. This workflow also provides for system monitoring and alarms whenever content is missing or other matters need operator attention.

With all this intuitive functionality, our Vizrt graphics automation solution enables a handful of operators and designers to support and monitor the on-air branding graphics required by a virtually unlimited number of channels. Since Corus and Vizrt continue to push the envelope on this innovative graphics automation, Corus Quay's operation promises to be even more efficient and resilient regardless of what the future holds.

Viz Ticker3D™

Possibly the most flexible real-time 3D ticker

Viz Ticker3D is an advanced ticker system that makes it possible to build creative and compelling graphic tickers with total flexibility. With Viz Ticker3D, multiple graphical elements (both scrolling and flipping) with various speeds can be displayed at the same time. The elements can include text, animated images, and sound.

✓ Multiple clients for on-air control and editing

✓ Multiple clients control a shared ticker message pool

✓ Open interface for data feed application integration

"

We have integrated the Viz Ticker 3D on-air branding system with never.no's social media aggregator platform. This allows us to take SMS and twitter messages to air seamlessly"

Muhammad Ifran / Broadcast & Satellite operation manager

VIZ TICKER3D is highly flexible, allowing users to create tickers of live data, animated 3D objects, images, and text. The tickers themselves are 3D objects, and can be designed to scroll around objects, for example a desks in a virtual set or the walls of a real studio.

TWO TICKER CONCEPTS. Viz Ticker3D supports two major ticker concepts: scrolling and flipping 3D tickers. With scrolling tickers, multiple ticker lines can be scrolled over the screen. The flipping ticker concept makes it possible to flip between pages, as if through a stack of cards. This solution allows for advanced visual transitions between pages, as well as automatically alternating pages with real-time content, such as the stock-exchanges indices.

DATA ENTRY. Ticker content can easily be added through the use of templates. Content can be manually entered or auto-retrieved. For example, in breaking news stories or text messaging (SMS/MMS) interactivity, content is manually entered. Election or sports results, news wires, social media, weather or financial data is typically auto-retrieved from external data feeds.

TYPICAL WORKFLOW. The ticker creation workflow typically starts with the design of a scene in Viz Artist. The next step is to scan and verify the scene structure in Viz Ticker Wizard, and then to build the logic for the ticker by performing a few quick configurations. The final step in the workflow is to launch Viz Ticker Client and add messages to the carousel. The ticker is then ready to go on air.
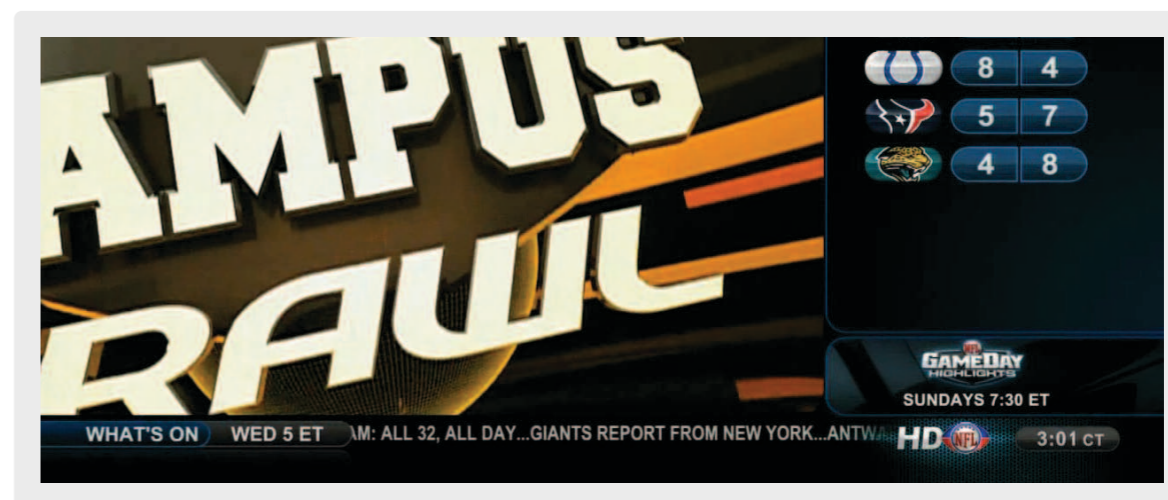
MULTIPLE CLIENTS. The solution architecture allows for multiple clients to create and control the live tickers. The Viz Ticker3D user interface manages all information and task scheduling in a user-friendly manner.

VIZ TICKER WIZARD AND VIZ TICKER CLIENT. The Viz Ticker3D solution consists of two applications. Viz Ticker Wizard is Vizrt's ticker configuration application. In this system, carousels (scrolling or flipping) are selected, and equipped with templates. Adjustments of the GUI settings in Viz Ticker Client can be defined from this system. The typical user of Viz Ticker Wizard is a graphical artist.

VIZ TICKER CLIENT IS VIZRT'S TICKER CLIENT APPLICATION. In this system, messages (instances of templates) are created, added to the carousel, and sent to air. The typical user of Viz Ticker Client is a journalist or operator.

KEY FEATURES

- Real-time 3D text, graphics, and animations displayed simultaneously with minimal buffering delay

- Direct editing of content on-air. Control keys and GPIs for on/off air, switching between carousel and animation transitions

- Multiple clients for on-air control and editing

- Multiple clients control a shared ticker message pool

- Open interface for data feed application integration

- Step-by-step setup of tickers in only a few minutes

- Multiple scrolling tickers

- Supports expire settings on individual elements according to time/date and/or number of runs

- Multi-render support allows you to choose tickers from a common pool of content

- Full unicode language support, including complex script

ADVANCED FEATURES. Viz Ticker3D distinguishes itself through several noteworthy features. Ticker elements can, for example, trigger events when entering the scrolling ticker. Such an event may be the start of an animation, or the display of pre-defined text or graphic objects positioned anywhere on the screen. Stock price movements can generate up or down markers, voting results can render 3D charts,

and so on. In addition, the system features multi-render support and can be set up to feed several multiple output channels from one message carousel. Multiple clients can control a shared ticker message pool, as well as perform on-air control. Viz Ticker3D also supports the Look-Ahead Transition Logic to facilitate and simplify visual transitions of multiple tickers on-air simultaneously.

Carousel

Control your live tickers with scrolling and flipping text, images and animated 3D objects, with various speeds, simultaneously.

Viz NLE™

Adding graphics to the timeline

Viz NLE connects the Vizrt real-time graphics pipeline with existing post-production environments and reduces design and development overheads. Our plug-ins for non-linear editing allows broadcasters to work smarter. It seamlessly connects the Vizrt real-time graphics pipeline with an existing post-production environment.

✓ Integrates with most major NLE systems

✓ Templates allow for editing graphic and video content

✓ Support for both PC and Mac platforms

VIZ NLE. Instead of recreating existing Vizrt graphics using other design software, users can now design each graphic once, and use it both live and in their post-production work. Viz NLE provides fast turn-around times in busy newsrooms, and reduced design and development overheads, for example, when changing a station's branding.

THE WORKFLOW. With Viz Content Pilot, the operator can pick ready-made graphics for a specific story. When using Viz Trio or Viz NLE on the Mac, the operator chooses an existing template and inserts text, images and video to create a new graphic which then appears in the timeline.

After choosing a graphic, the operator can move the Viz NLE effect around in the video project's timeline and change its duration. The effects can be edited at any time and in any way, from simple spell checking to choosing different pictures or graphics.

When stretching or shortening graphics that contain in and out animations, the integrity of the animations are safeguarded. The support for variable-length effects means that out-animations are always triggered at the proper time near the end of the effect. The same unaltered graphic can thus be used whether an NLE effect lasts for five minutes or five seconds.

AVAILABLE PLUG-INS

Viz NLE provides a suite of plug-ins for these NLE applications:

- Avid NLE systems with AVX2 support: Media Composer, Xpress Pro, NewsCutter
- Avid Liquid (formerly Pinnacle Liquid)
- Apple Final Cut Studio
- Viz EasyCut

Some third-party vendors have developed Viz NLE-like functionality in their own software:

- Harris Velocity
- EVS CleanEdit
- Sony XPRI

ADVANTAGES & BENEFITS. One of Viz NLE's key advantages is the ability to preserve existing channel branding without additional effort. The same graphics can be used in different scenarios, from a station's video editing projects to live broadcasts.

This is especially useful in near real-time coverage of elections and sports events, for instance, where the newsroom-oriented workflow of Viz Content Pilot or the live-system performance of Viz Trio.

Another important advantage is Viz NLE's unobtrusiveness.

As a plug-in within the NLE application, it saves the NLE operator time and effort by extending the power and functionality of the products in Vizrt's graphics pipeline without complicating the workflow with unnecessary details.

The workflow is native to the NLE application; Vizrt simply provides the plug-in to include Vizrt graphics.

Viz Weather™

The forecast never looked this good

Viz Weather is a complete 3D real-time weather system. It features a broad range of advanced visualization possibilities in both HD and SD.

✓ Complete real-time 3D weather solution

✓ Real-time data insertion directly from the data provider

✓ Template based weather system

VIZ WEATHER integrates with a broad range of weather-data providers and can trigger graphics and animations automatically. An intuitive GUI allows for controlling, switching, and manipulating the data. The solution is fully integrated with Viz World for creation of branded high-quality maps.

INTEGRATION OF LIVE WEATHER DATA.
Viz Weather is a template-based solution that allows the integration of live weather data into pre-defined graphic templates. Viz Weather supports weather information both from Vizrt's partners and from local providers. Viz Weather supports local real-time weather data with a resolution of less than 1 km, providing accurate local forecasts for use in transportation control and large outdoor sports events.

Viz Weather includes an interface to Weather on Demand (WOD) services such as StormGeo, CustomWeather and other data providers. The combination of Viz Weather and WOD results in a flexible, online user-selectable weather feed for point forecasts, grid animation data, satellite data, observations and more. The area chosen for the forecast is covered by a global on-demand service, allowing the user to change the area of interest and the 3D animations within seconds. The WOD service allows for going on air with locally updated weather information anywhere and anytime. This is particularly important in time-critical weather conditions such as floods, hurricanes or wildfires.

Sand and dust storms appear on regular basis in regions with dry conditions and scarce vegetation with low ability to bind the soil. Viz Weather can visualize forecasts for these storms with maps and point data as well as provide a risk index. This gives you an excellent tool to show your viewers maps over their region where the potential of the storms are high, medium or low.

ADVANCED VISUALIZATION and interaction. Viz Weather allows users to change weather-data graphics in seconds. A separation between data and graphics representation allows meteorologists and weather presenters to edit and control the broadcast from a control system on the fly. Viz Weather graphics are designed using Vizrt's 3D design application, Viz Artist. Its full range of design, animation and interactivity features is made available to the weather shows. Using these capabilities, weather shows can utilize touch driven presentations, sound effects and digital-video effects and even the integration of live video.

REALISTIC WEATHER PRESENTATION.
Viz Weather supports real-time weather presentation either through point-based symbols or as high-resolution 3D animations. The unique Particle Generator functionality allows the creation of a visually accurate representation of the forecasted weather development: The shape and movement of clouds can be visualized in 3D and broadcast showing the true speed of the various cloud layers. Weather data, such as temperature, wind speed and direction, weather symbols, 3D maps, and radar maps are displayed automatically with corresponding graphic elements in real-time, using the pre-made templates.

A TEMPLATE-BASED SOLUTION.
Viz Weather is a template-based system. Predefined templates allow meteorologists, weather presenters and graphic designers to focus on the weather situation and present it in the best possible way without compromising consistency with the channel's branding. Viz Weather's template-based approach combined
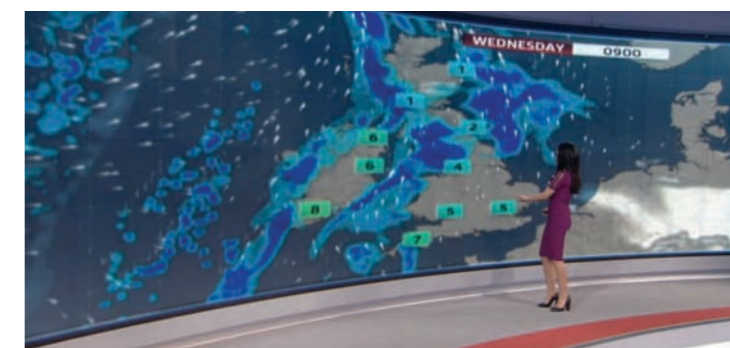
with advanced playlist capabilities allows automated weather shows and the re-use of data for cross platform distribution. Weather playlists can be also turned into a set of web-ready videos and interactive web-graphics.

KEY FEATURES

- Real-time data insertion directly from the data provider

- State-of-the-art 3D HD/SD graphics & animations

- Weather data can be used in tickers, virtual sets, weather presentations, and more

- Support for Viz World

- All graphics, such as 3D maps, isobars, radar maps, temperatures, wind speeds and direction, are displayed in real-time

- Template-based system that demands very little manpower

- Creation and manipulation of the show sequence from within Viz Weather

- Preview of weather graphics is instantly available within the user interface

- A standalone, low-cost weather play out application for manual or automatic play out

- Option for interactive shows

- Option for manual or automatic shows

- Advanced 3D weather visualizations

SUPPORTED DATA TYPES

- Point data: Temperature, symbol, wind speed, wind direction, and any other data field

- Model data: Isobars, isotherms, precipitation, and cloud-scans

- Satellite imagery

- Radar imagery and radar forecast

- Hurricane tracking display

- Manual input data: Fronts, pressure systems (HL), text, and splines

- Most other data can be added if needed

- Built-in support for weather ticker

Viz World™

Branded and animated maps

Viz World is the broadcast industry's de facto standard for the creation of branded maps and geographic animations. By extending Viz World to a server edition, it can provide real-time, branded map imagery to several clients embedded within Vizrt's control applications.

✓ Seamless integration with Vizrt's graphics and online tools

✓ Branded, template based maps

✓ Integration with satellite imagery providers

ITV News

VIZ WORLD places the world in the hands of designers and editorial staff with high quality branded map.

THE GRAPHIC TEMPLATES containing map references can be accessed and personalized by any number of users throughout an organization. In practice, the Viz World Client enables producers, journalists and operators to open map control objects within graphic templates from within Viz

Content Pilot, Viz Trio or Viz Weather, for example. By editing the map elements, users can change map locations, add animated 3D objects (such as car crashes, planes or fires), and animated labels; show street information, display on-demand satellite images of chosen locations, create geographical locators, and design fully animated 3D maps.

BRANDED TEMPLATE BASED MAPS. Just as many other Vizrt applications, Viz World is fully template based. All pre-designed templates can be accessed through the Viz Trio character generator and Viz Content Pilot, as well as Viz Weather and Viz Artist. Online publishers can even use Viz World to create branded, animated maps for their web sites.

From choosing a location to publishing a map that is consistent with channel or website branding takes a journalist less than a minute and doesn't require any exceptional software skills.

Any of the following options can be added to Viz World to expand its map-making capabilities, both for broadcast use and online publication.

NATURAL EARTH COLORING. Based on satellite imagery from Planet Observer, the Natural Earth Coloring option can add detailed imagery to your maps, down to a 15 m resolution.

KEY FEATURES

- Create branded maps directly from all of Vizrt's content control and design applications

- Supports Viz Content Pilot, Viz Trio, and Viz Weather

- No workflow changes, seamless integration with Escenic Content Engine

- Map labels can be generated in the map texture itself, or as 3D/2D Viz Engine objects

- Geo positions, zoom animations, map locators and objects can be placed on maps

- Objects and animations are created automatically using Viz Artist plug-ins

- Fully integrated with Microsoft Virtual Earth's Birds Eye view imagery

- Unlimited range of animations, from globe to street level

- Multiple destinations can be visited with one animation

- Supports 3D terrain and elevation

DIGITALGLOBE INTEGRATION. Access the largest database of high-resolution imagery from around the world within the Viz World interface. You can now get the most up to date imagery from events around the world with the FirstLook imagery option. FirstLook gives the user a list of imagery available for news events globally. The user can then choose to purchase and download the imagery and have it added directly to their map.

3D EXPORT. Fully textured genuine relief models can be created and exported at the touch of a button. The .object files produced can be used in Viz Artist or third-party 3D modelling packages.

PAINT AND EFFECTS. Add professional quality and fully-featured raster paint retouch and rotoscoping functionality.

THE VIZ WORLD CLIENT. Viz World can act as both a creation tool and a server platform. When it is upgraded to a server edition, it enables maps or map templates first prepared using Viz World to be integrated within 3D graphic templates using Viz Artist.

ADDITIONAL MAP DATA. Viz World includes a comprehensive database of political boundaries, coastlines, rivers, major roads, named places, and relief topography covering the entire world. In addition, there is a variety of optional additional data for you to choose from.
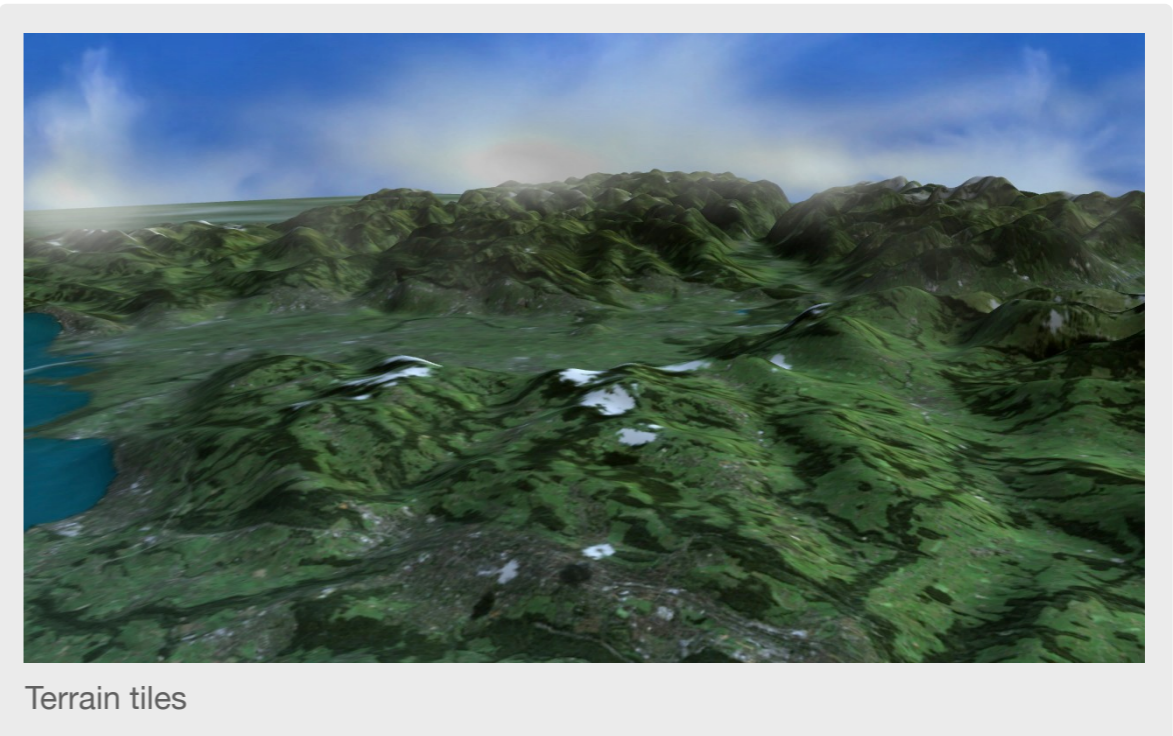
Terrain tiles

Viz Secure™

Keep your Vizrt system safe

Viz Secure is a premium system-support product tailored for both basic as well as complex Vizrt environments. It can monitor both on-air and content preparation systems, provides continuous visual status updates, reports failures, suggests remedial and preventative actions, and logs every system event, enabling statistical and trend monitoring.

✓ Real-time and non-stop monitoring

✓ Alarm and notification options

✓ Statistical reporting

VIZ SECURE solves the shared need of broadcasters for the highest level of system availability, especially for their on-air program streams. Complex software systems can be difficult to diagnose and need levels of engineering expertise that may not be available around the clock. Viz Secure allows to monitor these systems by running in the background and continuously reporting data back to a control hub. From there, alarms, exception reports, diagnosis tools and software-restart capabilities provide engineering teams with all tools necessary to maintain on-air reliability.

REAL-TIME MONITORING and exception reporting at component level. Viz Secure is monitoring individual system components, enabling better diagnosis and quicker, more effective responses from the engineering team. By controlling the internals of the Vizrt application performance, Viz Secure can highlight potential problems before they impact on-air performance.

DIAGNOSIS AND REMEDIAL ACTION INFORMATION. In many cases, problem solution requires a software application to be restarted. Subject to the site security policies remote application restarts can be enabled allowing specialist off-site engineers to reset a system. This is especially useful when shift engineers do not have the expertise required to deal with an issue.

RESILIENCE AND RECOVERY from network problems. Because the log data is initially held locally, a network-service interruption does not result in lost information. This can be of particular value when equipment is disconnected as part of normal operation - e.g. equipment in an outside broadcast truck will automatically report back to a hub at the base on re-connection.

SECURE, ENCRYPTED INFORMATION TRANSFER. A variety of security mechanisms ensure that Viz Secure logging and control data is not intercepted or tampered with. Clients who need system access from the outside can employ conditional access to protect the integrity of their broadcast network. Passwords protect access to viewing and actions capability.

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KEY FEATURES

- Monitors the health of entire Vizrt environments – applications, databases and hardware

- Real-time non-stop monitoring and exception reporting at component level

- Range of alarm and notification options

- Proactive maintenance diagnosis

- Remedial action information

- Fully scalable to monitor basic as well as complex environments

- Enables remote maintenance including restarting applications

- Secure, encrypted information transfer

- Easy to install and low system overhead

- Can operate as a slave application to other maintenance systems

- Advanced 3D GUI

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RANGE OF ALARM and notification options. Upon detection of a component failure, a rule set determines the action to be taken. The action can range from a state change in a dynamic display and text messages, to audible alarms and emails. Standard reports include time-to-fix, issues by period, by severity, as well as installed software versions.

STATISTICAL REPORTING to analyze trends. Short term (e.g. memory use) and long term (e.g. database disk occupancy) trends can be analyzed enabling pre-emptive action to keep the system operating at peak efficiency. Data can be exported and used off-site by support providers for off-line analysis.

PREMIUM 3D GUI option. The 3D GUI option uses Viz Engine to display an interactive 3D model of the physical environment showing current equipment status, and providing engineers quicker tools to locate and repair systems. Drill-down access can include touch screen monitors. The GUI can also show images of equipment racks and the internal layout of the computers.

By Pasravee Baile

Journalist & Media Consultant

Serving the full range

Vizrt is more than just the big names. When Sydney based Zspace went live with an award-winning bang, they proved that Vizrt is a perfect match even for the small players.
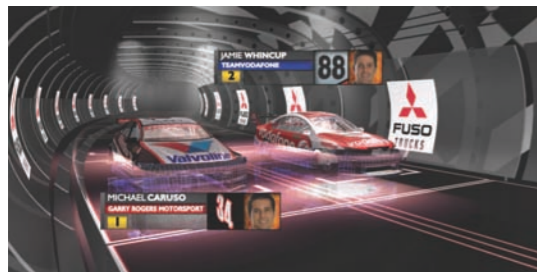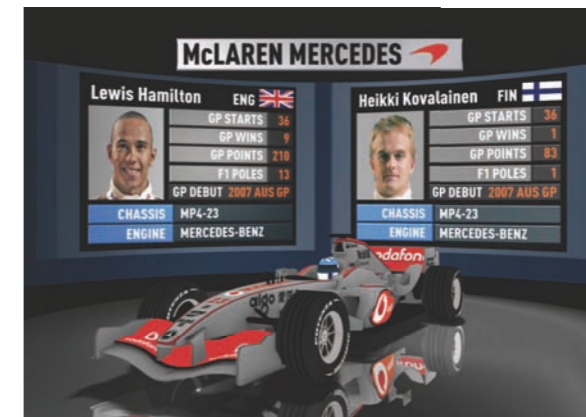
" *As this animation had to be run in real-time, the performance power of the Viz Engine shone through.*"

ZSPACE is a highly successful Sydney based Design Company providing TVCs and program branding graphics to the broadcast industry and has expanded its coverage with the establishment of its "Live" department.

Zspace's involvement with Vizrt began in 2003 with the launch of Network Ten Sports on Vizrt. Zspace had been providing graphic design services to Ch10 and when Ch10 Sport made the leap to Vizrt, they were there to take up the challenge.

Zspace worked closely with Vizrt to build some award-winning graphics for Ch10 MotorSport and Australian Football League coverage. The MotorSport 3D grid lineup animation was a huge success for Zspace design and showed the ease of data integration and power of the Viz Engine.

The design process involved building models of the cars in Maya and individual livery of the cars in Adobe Illustrator, imagery of drivers in Photoshop and the Pit lane buildings from the famous Bathurst track were taken from the architects CAD design. All these elements were easily imported into the Viz Artist and animated to the finished result.

As this animation had to be run in real-time, the performance power of the Viz

Engine shone through. The graphic was built to show the grid lineup of all cars instantly after the "top 10 shoot-out" where the top 10 cars time trial for Pole position. The 3D grid animation had to be data driven from the timing system to instantly provide the detailed animation live on air, where the graphic was rendered in real-time via data selecting the correct car lineup including team and car type, driver details with photo while fly-over animating the whole grid view.

ZSPACE is a creative collective with dedicated teams specializing in design, film production and solutions for live events, based in the heart of Sydney. Its focus is on mixing talent, experience and technology.

VIZRT HAS 542 licensed software dongles on PCs In Australia and New Zealand. There are 71 Viz Artists out there in the lands down under, along with 141 SD Viz Engines, 143 HD Viz Engines and 187 Viz Control Applications.

SINCE 2008, Sky Racing Australia's Viz Ardome system has been automatically recording, cutting and archiving around 1500 thoroughbred horse, greyhound and harness races a week. The biggest week so far was the week after Easter this year with 1739 races.

The V8 Motor racing has since moved to the Seven Network along with Zspace redesigning a new look grid lineup and providing the graphics production services to Ch7. Other involvement in motorsport for Zspace is also with the Formula One racing where they provide production services to the Melbourne and Singapore racetracks. Every race other than the F1 is covered by Zspace production and showing Vizrt graphics on all big and small screens around the tracks.

ONE OF THE KEY BENEFITS for the Networks and Zspace using Vizrt is the real-time rendering where these detailed graphics animations can be easily reworked with Sponsorship logos giving the Networks a valuable new revenue stream.

From these humble beginnings Zspace's use of Vizrt has grown steadily to now having started their "Zspace Live" department. There is currently 6 full time Vizrt focussed staff at Zspace providing graphics design and production services based around Vizrt products.

Petter Ole Jakobsen
Chief Technical Officer (CTO) / Vizrt

Petter Ole Jakobsen was co-founder of Peak Broadcast
Systems, which merged with RT-SET to form Vizrt in 2000.
He is the key developer of Vizrt's market leading software.
Prior to Peak, Mr. Jakobsen was senior developer with
the news department of Norway's TV 2.

Solving the multi-platform puzzle

Petter Ole Jakobsen is firm in his belief; new
channels and platforms will make life more complex
for broadcasters and publishers in the years to come.
But then he's also a firm believer in helping out.

DURING THE LAST couple of years technological innovation seems to have clicked into a secret sixth gear – and accelerated quicker than anyone could have imagined.

FROM YOUR POINT OF VIEW, WHICH OF THE CURRENT INDUSTRY TRENDS ARE THE MOST EXITING?
– My answer to that is without a doubt the emergence of multiple platforms, and the challenges facing everyone trying to bend their heads around solving it. It increases the complexity of the broadcast workflow tremendously, yet at the same time richly rewards those with a solid foundation to publish from, both editorially and from a more technical point of view. In this world, a lot of different products need to interact, which is no easy task. At the same time, maintaining several parallel workflows is not an option in the long run. That would indeed become very expensive. It's not a good thing editorial wise either. You'll find yourself buried in a pile of inputs, forcing your staff to make costly on-air errors.

WHAT IS VIZRT'S SOLUTION TO THE PROBLEM?
– Over the last five years, Vizrt has developed a unique platform workflow that lets you publish to TV directly from your preferred newsroom system. Simultaneously, the same personnel can also publish dedicated versions of the same story online, to different mobile phones, various tablets, and so on. On top of that, we convert and optimize both video and graphics, depending on the recipient's screen resolutions.

INTERESTING. HOW DO YOU DO IT?
– Graphics designed to run in full HD won't look good on your iPhone. That's why we scale the graphics to match, for example, and iPhone sized screen. All this is carried out on the fly, as part of the processing itself, making the graphics easier to read on each device, providing a much better end-user experience. At the same time you may also use those graphics and their corresponding design on all platforms, even if they only were meant for TV initially, and distribute them to all your designers and Viz Engines through Viz Graphics Hub; our solution tailored for distributing between different TV stations or between each station's various offices.

DID IT MEAN THAT YOU HAD TO RETHINK HOW YOU ASSEMBLED YOUR OWN PRODUCTS?
– Of course it did. Among other things, it sets a new standard when it comes to reliability. Each product's ability to scale is also greatly increased. There's no longer room for duct tape and paper clips. A media house can have 10-20-30 channels running on the same infrastructure, making stable and good delivery extremely important. All in all, the file-based workflow has handed us, as well as the TV channels, a whole range of new possibilities and challenges.

SOUNDS GOOD. ANYTHING EXCITING AND NEW UP YOUR SLEEVE, THERE?
– At this year's NAB, we expanded the reach of the Viz Media Engine. It is now accessible in all of Vizrt's platforms as a media content tool. It's a very exiting product which we've put a lot of thought and effort into, and a product I have great expectations attached to. We're essentially trying to redefine

how the industry handles its file-based workflows. We've adjusted the workflow, based on how we feel it should be done and what our customers have told us. In order to improve your workflow, the Viz Media Engine can also be plugged on top of most media asset storage solutions out there.

A-HA. SO YOU DISTINGUISH BETWEEN A FILE-BASED WORKFLOW AND STORAGE?
– Yes, and I believe this is important for the future. A file-based workflow is considerably more than just digital storage of edited stories and raw material. By using Viz Media Engine, you gain a united and effective workflow, from acquisition to play-out and/or distribution.

… MEANING THAT THIS WORKFLOW IS AVAILABLE, EVEN IF YOU JUST RECENTLY BOUGHT A MAM SYSTEM WITHOUT AN OPTIMAL WORKFLOW?
– We've spent a considerable amount of time building our APIs. They're open and RESTful. Through these, we can interface up against most of the solutions out there, thus letting the Viz Media Engine collect the files and place them where you want them to be published.

BUT HOW DOES THE TRANSCODING AND DISTRIBUTION HAPPEN?
– It's possible to use whatever transcoding solution you desire, obviously. But the Viz Media Engine has its own specialized transcoding and encoding component, making sure that everything works seamlessly and that video and graphics are optimized for each device's display. As mentioned earlier, it's also possible to insert graphics at this stage.

OK, SO HOW IS THE ACTUAL ONLINE PUBLISHING PART DONE?
– Again, you're free to use an existing system, but Vizrt also offers a newsroom system tailored to fulfill the requirements of multi platform publishing; the Vizrt Online Suite. The system supports online publishing, connected TVs, as well as mobile web and apps.

ANYTHING ELSE TO ADD?
– Vizrt wants to make innovative, effective and reliable products. The best part is that our customers respond positively when using them. No media house is too small, nor too big, to take advantage of Vizrt's product portfolio. It's that simple.

Real-time graphics for stereoscopic broadcast

Plans to show moving pictures in three dimensions are as old as the movie and TV industry itself. After first experiments in the early 20th century, the technology is finally ready for prime-time. Far from being simply a visual gimmick, stereoscopy can help broadcasters to add a "new dimension" of information to their content. Examples of use include sports broadcast where stereoscopy allows the viewers to follow the action more precisely than in a 2D projection.

TURNING 2 DIMENSIONS INTO 3. "Many roads lead to Rome" when it comes to showing 3D video. Existing technologies can roughly be separated into two categories: 3D systems that use conventional screens and rely on special glasses for the viewer, and systems that use specialized screens and no glasses. Note that Viz Engine produces stereoscopic output independently of the screen technology. In short, anaglyph images provide a stereoscopic 3D effect by using two-color glasses, while polarized 3D glasses create the illusion of three-dimensional images by restricting the light that reaches each eye. Alternate frame-sequencing is a third method of showing 3D film using specialized glasses. The images are placed into a

single strip of film in alternating order; the first left-eye image, then the corresponding right-eye image, then the second left-eye image, followed by the second right-eye image and so on. A fourth option, autostereoscopy, is a method of displaying three-dimensional images that can be viewed without the use of special headgear or glasses on the part of the user. These methods produce depth perception even though the image is produced by a flat device.

A complete stereo-enabled platform from editing to on-air. It is one of the challenges of 3D broadcasting that graphics behave differently in 2D than they do in 3D. While 3D graphics can look perfectly alright when you see them as a 2D projection, they may look

very wrong when rendered as stereo pairs for 3D output. This is because in 2D we cannot differentiate between an object that is further away and scaled up and an object which is closer but scaled down.

Viz Artist has by nature always been a full fledged 3D program, from version 3.3 revision 9082 it also features built-in stereoscopic rendering capabilities.

Grids help the designers to move and align the objects in true 3D. During playout, the two graphics cards, or two engines, take on the role of the left or right camera, or they can render an image which combines the pair as side by side, interlaced etc. (For a complete list please see the Viz Artist documentation.)

KEY FEATURES

- When properly designed, most existing Viz scenes already work immediately

- Vizrt's existing control software works immediately for stereo

- Vizrt's existing control and rendering hardware can be used for stereo or single camera output

- The output format can be changed on-the-fly

- Stereo parameters can be adjusted in real-time during production

- Editing is available in stereo mode

- Supports both shutter-glasses and as autostereoscopic displays

WHAT IS NEEDED TO GET STARTED? Creating stereoscopic play-out is in the nature of Vizrt's graphics applications. Even when the play-out happens in 2D on conventional TV screens, the graphics themselves are delivered as true 3D animations, following proper physical and optical rules. Changing the play-out to support stereoscopic devices is therefore just a "natural" extension of the actual rendering process.

Stereo support is native for Viz Engine 3.3 from revision 9082. For the VGA version Viz Engine supports quad-buffered rendering, which enables the scene editor for stereo viewing too. When selecting the side-by-side approach, only the full screen on-air mode will display a stereo pair where the left and right images are next to each other.

To produce two separate SDI fill and key signals, either a dual-channel setup or two Viz Engines are needed. Viz Trio or any other control software will communicate with the two engines using a software component from the Viz Video Wall distributor to ensure field-accurate synchronization.

Social TV Solution

# Visualize the power of social media

Social content from the world

✓ Visualize content in new ways

✓ Manage social media interactions

✓ Editorial tools for tracking social media
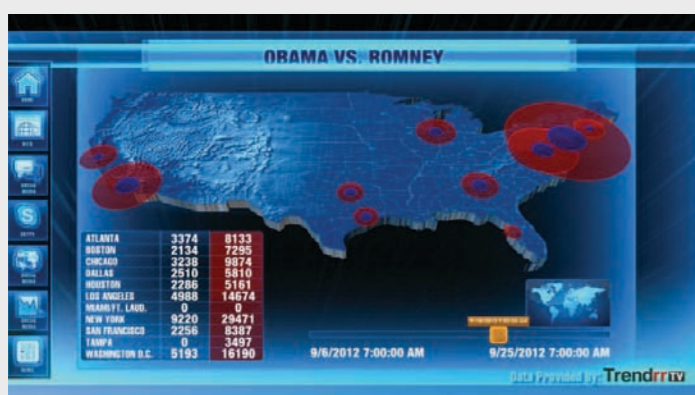
Take advantage of the metadata that comes with tweets and check-ins. Content can be georeferenced on a Viz World map showing location, subject and even changes over time.

It's no secret that social networking has become a major force in the way the world communicates. Hundreds of millions of people on social networks like Twitter and Facebook every day interacting with each other and sharing the world around them. Vizrt has developed tools for broadcasters to harness this content in ways never seen before.
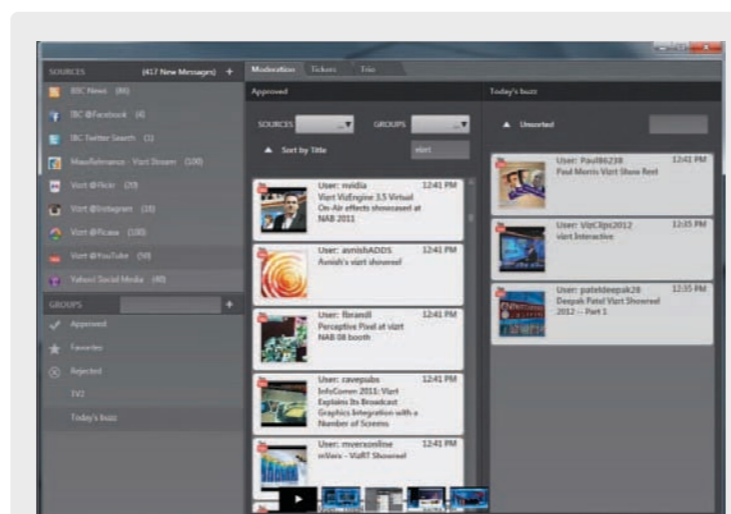
The moderation tool assists in filtering and selecting messages. Journalists search content then easily send the selected messages to Viz Ticker or Viz Trio for on-air presentations.

CAPTURE SOCIAL MEDIA. Vizrt brings a solution that captures social media content and allows the presenters to tell a story with this content in visually compelling ways.

Content can be captured from Twitter, Facebook, Flickr, YouTube, Instagram as well as third party partners like never.no, TrendrrTV and Mass Relevance.

With new editorial tools for selecting messages, journalists search content then easily send the selected messages to Viz Ticker or Viz Trio for on-air presentations. Vizrt has developed tools to display analytics data so the designers can easily build interactive scenes that visualize the data with unlimited possibilities. An open API allows custom applications to directly integrate with Vizrt
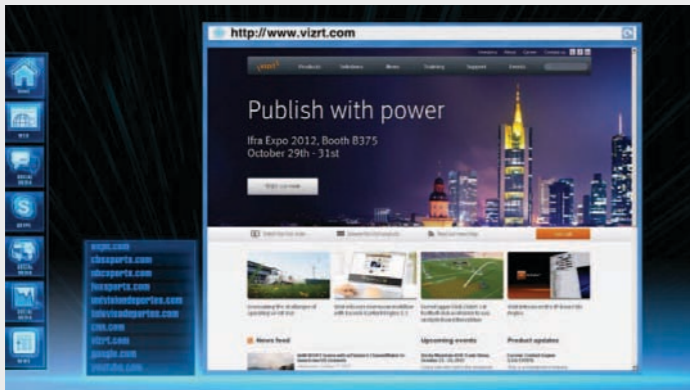
The built-in web browser gives the presenter control of the entire web as part of an interactive presentation. Browse web pages, play videos with audio all a new plugin for Viz Artist.

LIVE REMOTES FROM ANYWHERE. Turn Skype into a virtual live truck with the new Skype interaction tools from Vizrt. Producers prepare calls in advance and build them as part of a newscast's playlist. Journalists take the conversation live on-air all with simple controls in Viz Trio and Viz Content Pilot.

SPREAD YOUR MESSAGE. Send breaking news and program updates to Twitter and Facebook from the newsroom or control room during live broadcasts from newsroom control systems or Viz Trio. Schedule automatic updates with Viz Multichannel. Vizrt's channel branding system brands every channel with content from traffic and automation systems and sends breaking news and program information out through a automated system so your viewers are always kept up to date.

With editorial, visualization and automation tools, Vizrt is revolutionizing the way social media interacts with the broadcast world.
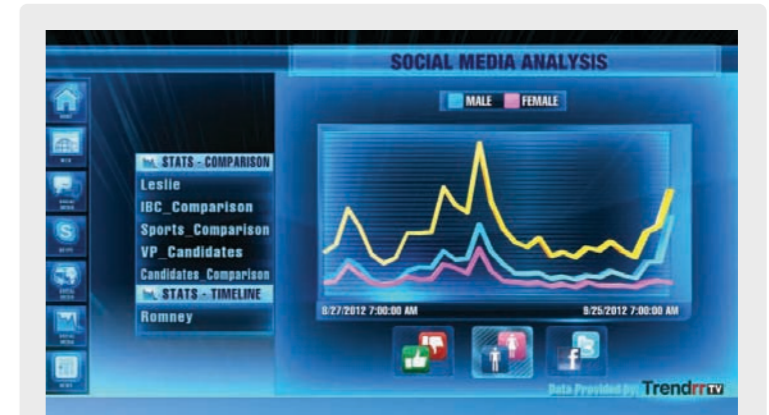
Content from social media can be broken down into different demographics. From subject to gender to positive or negative comments. A suite of plugins for Viz Artist allows the content to be visualized in many compelling ways.

Chapter 3

Online

In the modern newsroom, journalists juggle multiple programs to manage content, wasting time that could be spent on creative storytelling. Content must now be distributed not just to the web but to the multiple mobile devices in everyone's posession. Vizrt's online tools give you an open continuous editorial workflow for digital delivery from a single point while distributing your content to every needed channel.

VIZRT MAKES IT EASY TO CREATE CAPTIVATING STORIES.

Every day, leading players in the world's media market rely on us to manage their content and provide a dynamic platform for storytelling. Around 600 Internet media sites benefit from the possibilities we provide through our online content management system and solution for multi-platform distribution to handheld devices.

Some of our biggest online customers are Times Online, The Sun, Aftonbladet, The Telegraph, and Welt Online. Among our mobile users are Turner, Al Jazeera, TV2 Norway and SVT.

We offer one workflow for video streaming and all supporting functionalities. The complete package comes in one framework, securing smooth delivery on every viable platform or device needing a specific video format or content enhancement. Vizrt's online and mobile workflow allows you to build and easily maintain a complete presence on both platforms.

Did you know that Al Jazeera...

......uses Viz Reporter on their mobile phones to send video footage directly from the field to the newsroom? "A bomb went off with one of our reporters on-site. Without a camera, he grabbed his phone and filmed the destruction. He then sent the material straight back into the news desk workflow – in full quality" says Safdar Mustafa, Head of Mobile Media at Al Jazeera Network.

With the same editorial crew creating content for distribution in multiple channels, the traditional line between TV broadcasting and Internet communication has disappeared. In order to be compelling online as well as on mobile and emerging formats such as iPad, video, audio and graphics editing needs to be as integral to the content creation process as text and image have become. The result is a workflow that puts video and graphics editing at the fingertips of any journalist producing online and mobile output.

Vizrt Online Suite™

Content on all platforms

Vizrt Online Suite is a high performance content management system that enables content creators to build great user experiences for any device at any time

✓ Multi-channel and cross publishing to web & mobile

✓ Add graphics and video to your story

✓ In page editing of web pages
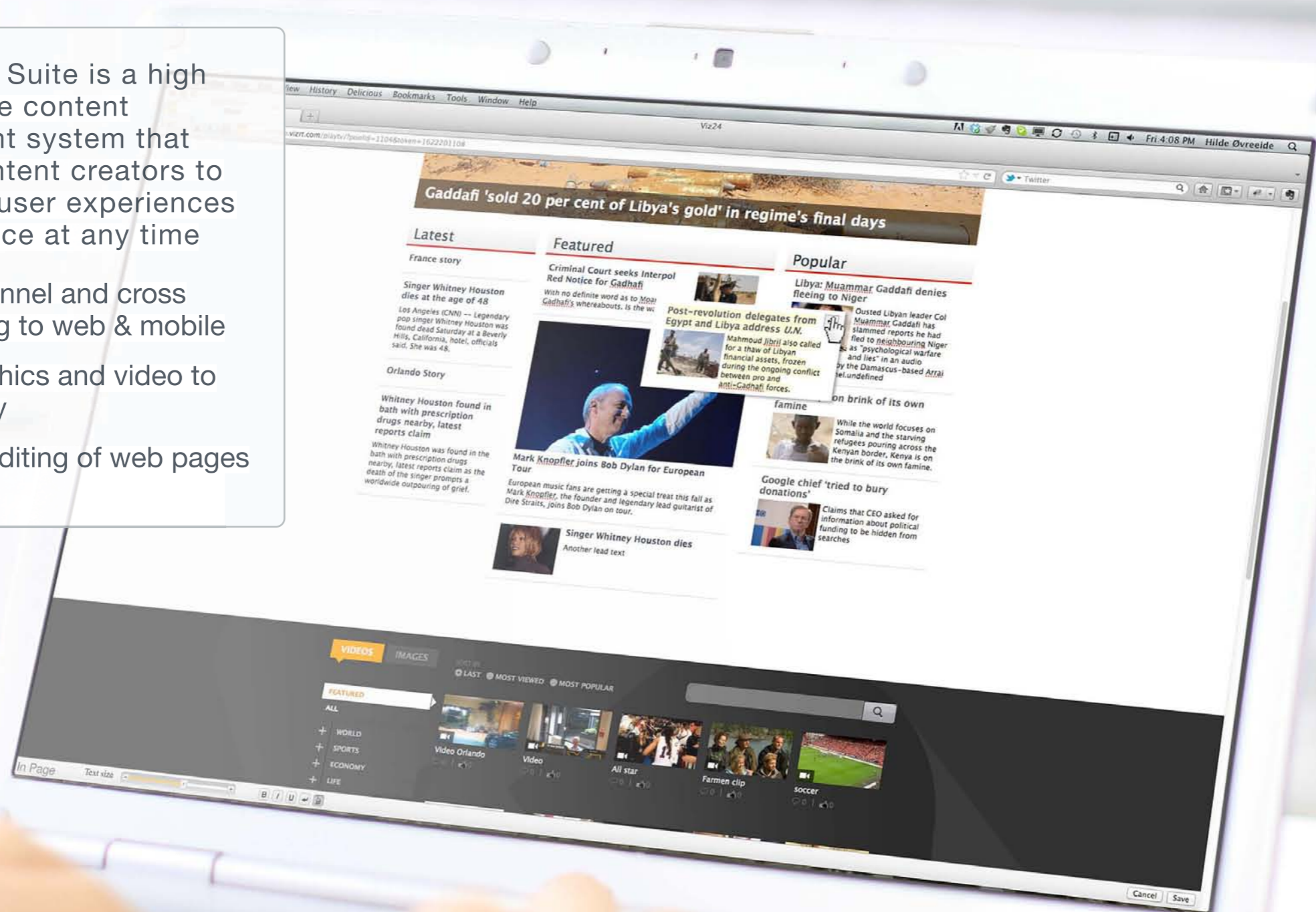
THE VIZRT ONLINE SUITE facilitates multimedia production and multichannel content distribution. It provides a single dynamic production pipeline for video, maps, graphics, text and images that allows content to be published both to the web and to mobile and tablet devices.

Our most important clients include Aftonbladet, The Sun, The Independent, The Hindu, Trinity Mirror plc, De Telegraaf, Berliner Morgenpost, Impresa, n-tv.de, The Globe and Mail, and YLE.

When the Vizrt online suite is integrated with Vizrt's graphics and media asset management solutions, web journalists can easily add videos, maps, still and 3D graphics to stories published across different platforms.

ESCENIC CONTENT ENGINE is the core of the Vizrt Online Suite and is designed for high volume and high traffic content management. With highly efficient multi-level caching technology, the system provides a responsive application for web editors, and also ensures that end users experience a fast website. Escenic Content Engine offers near-linear scaling and installations range from single-server installations to advanced multi-server setups with internal and external load-balancing, redundancy, distributed memory caches and content delivery networks.

ESCENIC CONTENT STUDIO is the content producers' tool. It has a fully featured set of tools for editing text, images, video, graphics, keyword tagging, geotagging, and more. Escenic Content Studio allows the reporter to create complex layouts with simple operations.
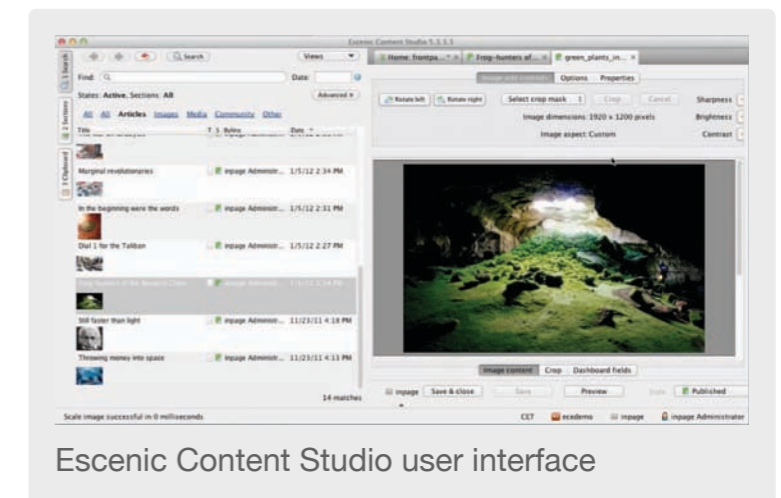
Escenic Content Studio user interface

KEY FEATURES

- Architecture designed for multi-channel and cross-publishing

- In page editing of web sites

- Open architecture with Java and REST

- Mobile adaptation and device detection APIs

- Effective, responsive and customizable workspace for web publishing

- Drag and drop images, videos, text, articles, etc.

- Upload video and images directly into Escenic Content Studio

- Add elements to a web article with the online, graphics and MAM solution

- Add graphics to videos as part of your video publishing workflow

- Add branded maps to your web articles as part of the editorial workflow

- Extensive JSP tag library for efficient website development

- Powerful and flexible presentation layer

- Full-featured high performance, scalable content repository.

- Live monitoring of both internal and external data with a built-in RSS reader

- Tag support and taxonomy

READY-MADE BUILDING BLOCKS.
Websites are built with the Widget Framework component, a modular widget system for implementing websites. Users can create complex layouts by means of simple drag-and-drop operations. It provides users with ready-made building blocks for setting up web sites and it is a fast and flexible way to construct sites using pre-configured functionality. The Widget Framework allows users to change websites without the need for coding and subsequent debugging.

MOBILE INTERNET PUBLISHING.
Together with the Escenic Content Engine, the Viz Mobile Expansion provides publishers with a complete multi-channel content management system for web and mobile. From

within the Escenic Content Engine's editorial desktop tool, Escenic Content Studio, users can publish mobile Internet content at the same time as publishing to the web – saving considerable time and effort. All the device adaptation is automatically carried out in the background. Content and layout are optimized and formatted to support the full capabilities of individual mobile or handheld devices.

BUILDING ONLINE COMMUNITIES.
Viz Community Expansion is a solution for running large, full-featured, high-volume community sites. It allows users to publish pictures and images, connect with friends and join groups. It provides everything needed to create a living online community and connect your site to Facebook and Twitter.

BRANDED VIDEO CONTENT. With Vizrt's web editing tools, users can search for a video clip, open the video in a video timeline editor and add graphics. Elements can be added as logos, as a score line, as a title, or as any other graphical 3D element. The Viz Content Pilot integration ensures users can insert the graphics without leaving the Escenic Content Studio environment. The timeline editor lets you choose between different predefined templates. The user then adds metadata, previews the video with included graphics and publishes the article with branded video content from within the same user interface.

The graphics can be designed to adapt to each platform and device.

AN INTEGRATED SOLUTION FOR MANAGING VIDEO ASSETS. Escenic Content Engine also integrates with Viz Media Engine, Vizrt's media asset management system – allowing online journalists to access video clips, stills, graphics, and audio files from within Escenic Content Studio and publish them along with a story. Video clips can easily be edited using built in non-linear editing applications before being made available for publishing on the web.

ADDING VIDEO AND GRAPHICS TO THE WEB PUBLISHING WORKFLOW.
Integration between Vizrt's online suite and Viz Content Pilot enables web

editors using Escenic Content Studio to easily add a graphical element to a story, as a video, a still image, or a 3D graphics. The use of templates allows editorial staff to enter data, images and videos into predefined graphic animations and to preview the end result instantaneously.

UPLOADING CONTENT FROM MOBILE PHONES. When transferring video files or high-resolution pictures from Viz Reporter, the journalist can select which section of a web page the content should be sent to. Content created with Viz Reporter is instantly available in Escenic Content Studio, along with its entire multichannel and cross-platform publishing capabilities.

ADD A LOCAL MAP TO YOUR STORY. Escenic Content Engine integrates with Viz World, the broadcast industry's de facto standard for the creation of branded maps and geographic animations. Users can create branded, animated maps and insert them directly into a web page.

THE IN PAGE PLUG-IN allows a content editor to edit a website's text and images, and rearrange content items directly in the browser. If the website is based on the Widget Framework, In Page can also be used to make changes to the configuration of the underlying widgets, thereby enabling layout changes from within the browser.

Ash cloud widens UK trade gap

Britain's giant trade gap with the rest of the world widened unexpectedly in April, largely due to the effects of the volcanic ash cloud, official figures showed today.

✏ Edit summary
🔧 Widget config

Google and Apple at war over mobile advertising

Scandinavian Broadcasters use responsive web design to create unique mobile experiences

SVT Sweden and Yle Finland use Vizrt software for their digital media production workflow, with the design featured in their online and mobile device services based upon their own in-house research and development.

> **"**
>
> *Cutting edge responsive web design efforts by SVT and Yle will impact and shape Vizrt's own product development efforts."*

Petter Ole Jakobsen / Chief Technical Officer / Vizrt

In responsive web design, the on-screen content is optimized for the resolution and size of displays on devices like smart phones, tablet computers, and laptops. The web page – including text, video, graphics, apps, and even navigational elements –contains logic that prompts each device to automatically adapt the presentation layout according to its own unique display characteristics.

This fluid end-user experience goes even further with lazy-loading, which enables easier navigation. For example, click-for-more links cause the new text to open right there rather than in a separate pop-up window.

"SVT and Yle are in the vanguard of broadcasters using responsive web design to enhance the user experience of their multiplatform services," said Petter Ole Jakobsen, CTO of Vizrt. "To deploy responsive web design, they're maximizing global standards, such as HTML5 and CSS, now widely supported within smart phones and other mobile devices. Since Vizrt prides itself on creating standards-compliant solutions, our Vizrt Online Suite also supports HTML5 and CSS as well as JavaScript, AJAX, and content modelled in XML."

The Vizrt Online Suite, a content management system (CMS) used by SVT and Yle, encompasses the Escenic Content Studio for fast creation of media-rich websites, as well as the Escenic Content Engine, which stores and delivers content and offers an API that developers can extend to implement responsive web designs.

The Vizrt Online Suite also includes a powerful tool called the Widget Framework, which provides users with ready-made building blocks (widgets) that simplify website creation.
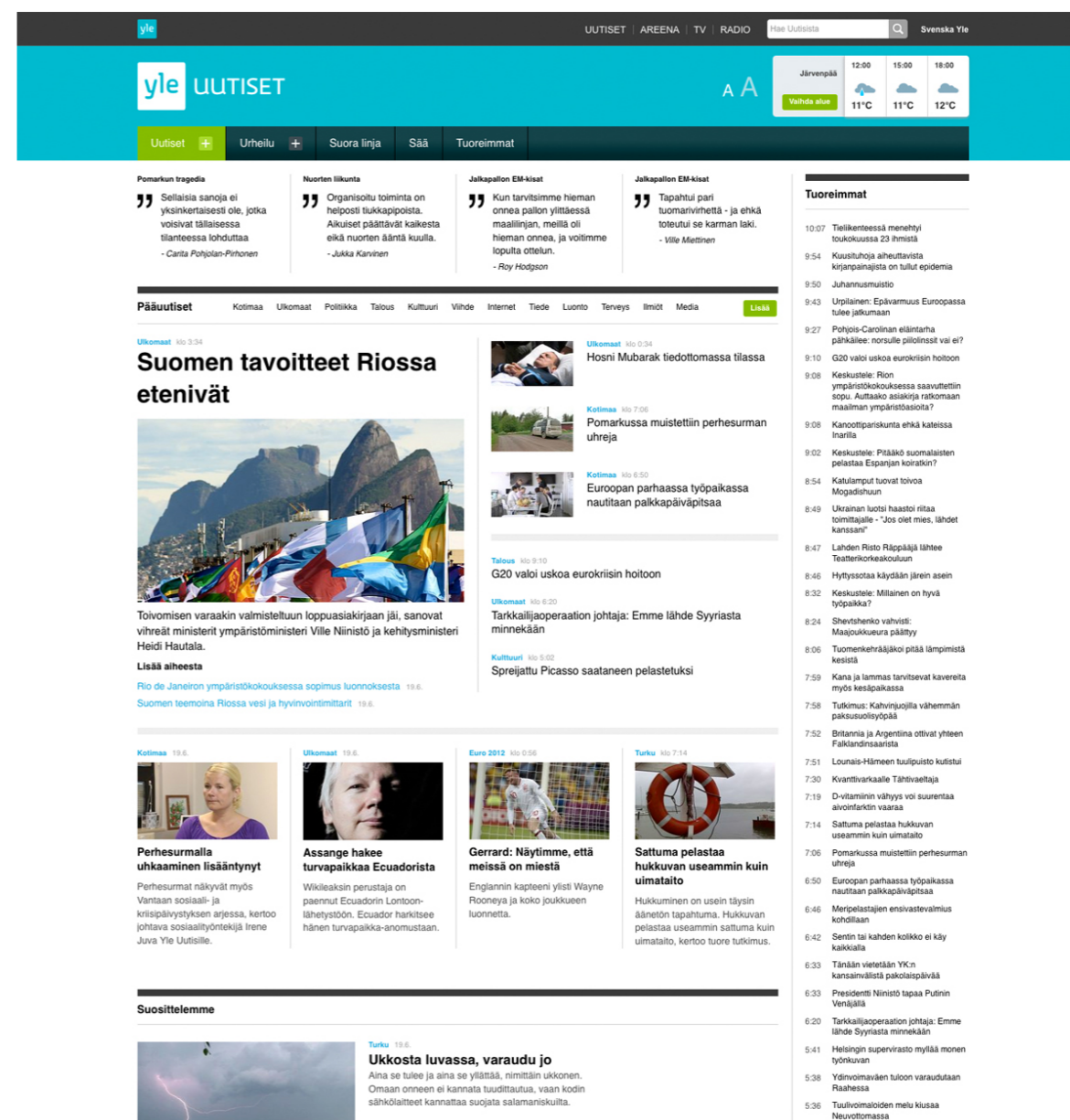
Widgets are mini-templates that contain code to swiftly create specific elements of the web page, such as articles, menus, ads, polls, and other features. Content dropped into a particular area of the layout assigned to a widget automatically assumes the functionality of that widget, which speeds up advanced website development even by non-technical staff.

"We designed the Vizrt Online Suite and Widget Framework to give our customers a comprehensive solution for designing websites right out of the box," said Petter Ole Jakobsen. "We've been supporting our Scandinavian public broadcast customers as they extend the code for our responsive web design. Our goal is to use this newly acquired technical expertise to expand our Widget Framework to include widgets that automatically enable responsive web design."

"New widgets for responsive web design and other Vizrt software advancements will enable our customers to make their media-rich websites look even better on smart phones, tablets, and other display devices."

LINKS

SVT Play for video on demand

SVT Barnkanalen (Children's channel)

SVT Uppdrag Granskning (Investigative journalism)

SVT OS for the 2012 Olympics

SVT Melodifestivalen (Eurovision Music)

YLE Finland's for news and for sports
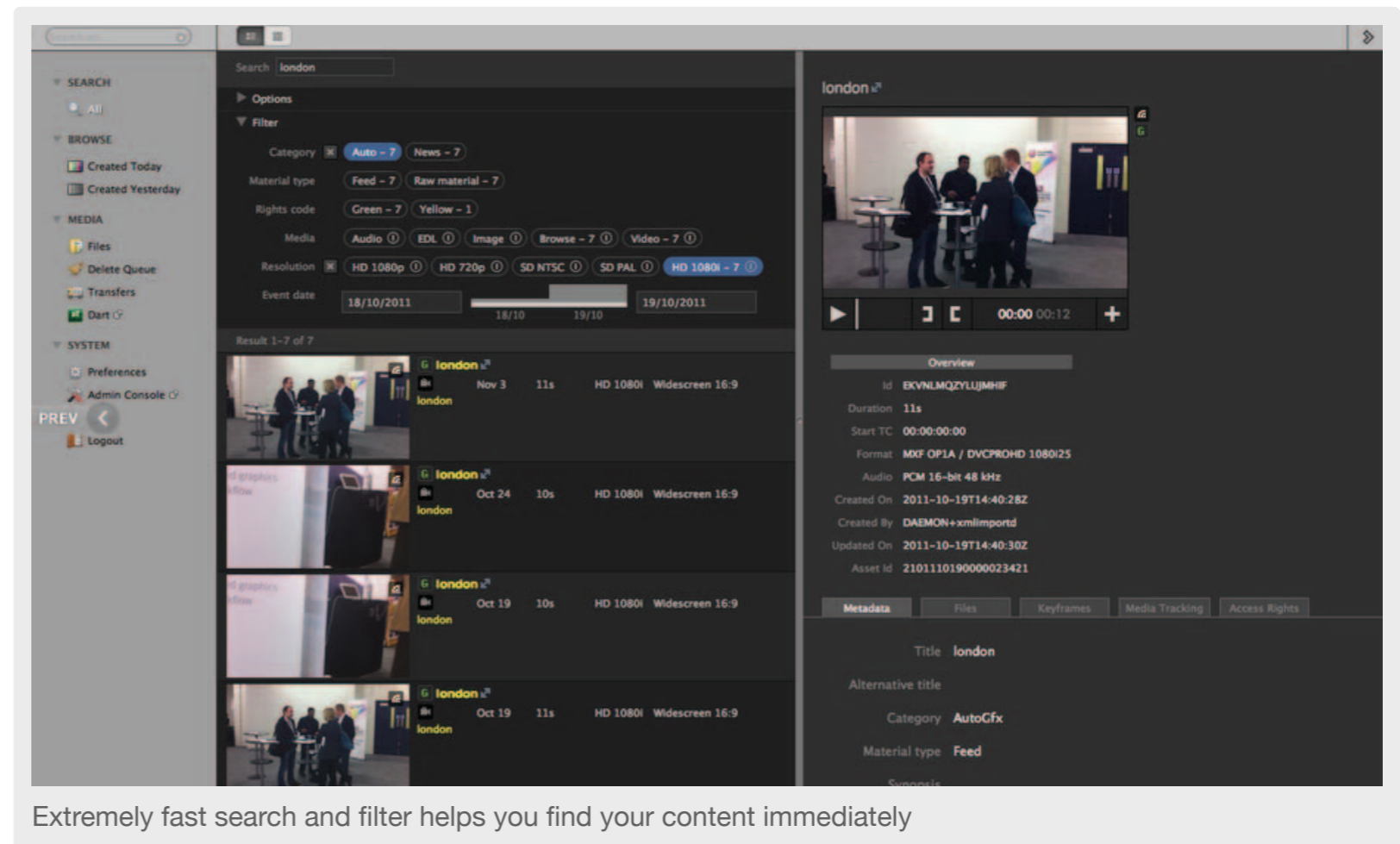
Viz Media Engine™

Broaden your reach

ONLINE PACKAGE

A strong focus on online and mobile production. Content is transcoded and distributed to multiple mobile devices and websites.

✓ Import content from any device

✓ Integration with CDN or Publishing point

✓ Adapt and deliver to any platform

VIZ MEDIA ENGINE offers a flexible and complete solution for video publishing, integrating device adaptation, delivery to any online platform, reporting of video consumption, transcoding, encoding, it also directly extends existing workflows for broadcast, graphics, editing and archiving. Individual and specialized products within each segment are now harmonized, forming an integrated solution.

Viz Media Engine takes care of the complete chain of ingesting, adapting and publishing content to a variety of formats and consumer terminals. Mobile operators, broadcasters and online media have chosen Viz Media Engine to make their content available on new platforms and to create

Extremely fast search and filter helps you find your content immediately

additional revenue chains. The platform can be built as a centralized node that controls web and streaming servers in other locations.

The Viz Media Engine is particularly suited to cross-platform media delivery. The server also offers an extensive API where most of the

functions of the Viz Media Engine server are exposed. This allows you to control content transcoding, streaming, playlisting and publishing from external systems.

All editorial tools are built for multichannel content management. Control of content and layout for mobile versions is easily handled from a single user interface. The device database is updated on a daily basis and supports thousands of different handheld devices. Dynamic video playlists and picture-in-picture features are supported.

When utilizing the Viz Media Engine solution, you can re-purpose your graphics online by merging graphics and video adapted for each device in

the transcoding step, and adjust your graphics to fit various target platforms. You can even simultaneously produce the same video with different branding.

THE CONTROL SERVER performs device detection for mobile phone and web browser video capabilities. It contains an extensive content API for ingest, transcoding and publishing. Conditional access to content can be managed in this component as well. The Control Server is designed to deliver a broad set of video format outputs to maximize the capabilities of each handset. The Control Server allows for control of the publishing process through the WebService API, and a high-performance API is offered for building adapted video content into Mobile Internet (WAP/XHTML) pages

on a session-by-session basis. This API can also be utilized to build content into On Device Portals, Flash Lite Players etc. The Control Server is designed to deliver a broad set of outputs of video formats to serve all handsets in the market with optimal video quality and utilization of each handset's capabilities.

Input video can be sourced from either an IP video source, or from a video capture card. A source video is prepared in the same way as a video clip. A single live stream of video is transcoded simultaneously to a predefined set of outputs, including resolutions from 128x96 H.263 and up to 480x360 H.264 (SD/HD) for iPhone.

VIZRT'S VIDEO TRANSCODER gives complete control over all aspects of a transcoding job. It converts an ingested file into a large number of target formats to optimize the content for all the different terminals such as mobile phones, web players, etc.

Input video can be sourced from either an IP video source or from a video capture card. A source video is prepared in the same way as a video clip. A single live stream of video is transcoded simultaneously to a predefined set of 10 different outputs, including resolutions from 128x96 H. 263 and up to 480x360 H.264 (SD/HD) for iPhone.

For mobile video on demand content, the Video Transcoder by default prepares around 15-20 versions for streaming video in the range from 128x96 (SubQCIF) H.263 video up to 480x272 H.264 video for iPhone and 640x368 for iPad and other high-end terminals. These versions consist of H. 263, H.264 and MPEG-4 SP versions in different resolutions, frame-rates and codecs for audio and video.

These transcoding jobs are built from an XML template that can be edited on the server. This XML template allows for very detailed access to the codec tools to control the transcoding on low level.

For high volume transcoding jobs, multiple Video Transcoders can be configured as a transcoding cluster to deliver faster transcoding for immediate publishing.

The latest Video Transcoder now also supports a plug-in for Viz Trio and Viz Engine to ingest graphics and video separately as input and to combine these in an optimal manner during the transcoding process to deliver the best output per bit-rate and to deliver sharp graphics for all scenarios. This integration delivers a seamless process for inserting optimized graphics designed specifically for the different outputs for mobile phones, iPad, iPhone, Web-TV, HD Video etc.

KEY FEATURES

- Media Asset Management
- Ingest
- Search
- Editing
- Keyframes
- Playout & Distribution
- Control Server
- Video Transcoder
- Live Video
- Video Segmenter
- Streaming Server
- Live Video Rec.

SUPPORTED FILE FORMATS

.3gp / .aac / .flv / .m4v / .mov / .ogg .vc1 /.3g2 / .amr / .gfx / .m4a / .mpa .mfx / .wmv /.avi /.asf / .h263 / .mp3 .mpg / .rm / .wma / .ac3 / .dv /.h264 .mp4 / .mpeg / .ts / .vob

SUPPORTED AUDIO CODECS

AAC / AMR-NB / DV Audio / MPEG-1 (mp1,2,3) / Windows Media Audio Pro / AC-3 / AMR-WB / orbis / PCM (16,24,32 bit) / Real Audio

SUPPORTED VIDEO CODECS

Cinepack / DV Video / DVC Pro 25 DVCPro 50 / DVCPro 100/HD Flash Video / H.263, H.264 HuffYUV, M-JPEG / MPEG-1, MPEG-2 (PS & ES) / MPEG-4/XVID / Microsoft MPEG-4, ON2 (VP5,6) / Sorenson Theora / VC-1, VC3/DNxHD Windows Media Video (7,8,9), XVID.

SUPPORTED VIDEO FORMATS

HD

- 1080i50/59.94
- 720p50/59.94
- DV100/DVCProHD wrapped in MXF-Op1a
- DIF DNxHD wrapped in MXF-Op1
- XDCamHD 422
- wrapped in MXF-Op1a
- AVC-Intra wrapped in MXF-Op1a

SD

- DV25/DVCPro25/DVCam wrapped in MXF-Op1a
- DIF DV50/DVCPro50 wrapped in MXF-Op1a
- DIF IMX30/50 wrapped in MXF-Op1a

Viz Reporter™

Make every journalist a video reporter

Viz Reporter increases your chance of capturing exclusive content by allowing your journalists to capture high quality video content with their mobile phones and send it directly to your media server.

✓ Runs on standard mobile phones

✓ Uncompressed transfer of captured video

✓ Stream live from your mobile phone

✓ Available on the App Store

Available on the App Store

"
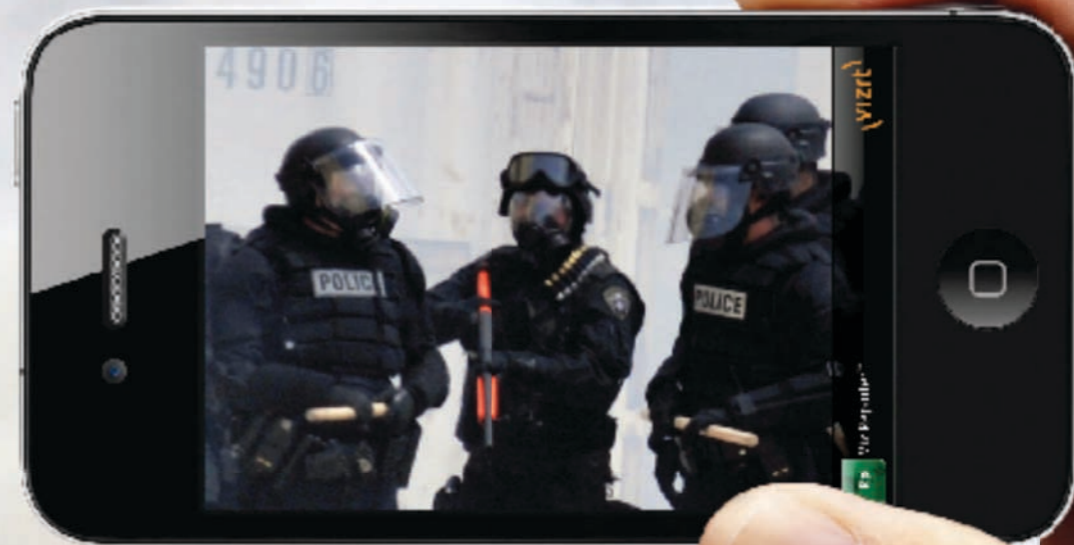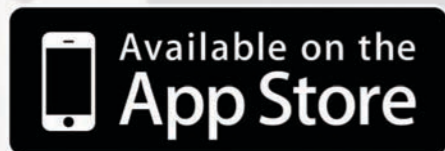
Viz Reporter has improved our productivity a great deal. It allows us to process content uploads more quickly and get the images published right away. It overcomes the quality issues with mobile phone content, and our multimedia material is now handled in an optimal manner."

Rolf Dyrnes Svendsen / Editor and Director of Digital Media / Adresseavisen

BREAKING NEWS CONTENT is highly valuable, but all media companies face the same challenge: They never know where and when the next big story is going happen.

VIZ REPORTER increases your chance of capturing exclusive content by allowing journalists to capture high quality video content with their mobile phones and send it directly to your media server. There's no reduction in quality, no time consuming conversion. The journalists don't even need a PC or WiFi access.

TODAY'S MOBILE PHONES have extensive multimedia capture capabilities, making mobile to air broadcasting a reality for TV stations.

VIZ REPORTER & LIVE REPORTER fully utilize the multimedia capabilities of modern mobile phones and enable broadcasters, media houses, content providers and mobile operators to build new revenue-generating services with mobile high-resolution multimedia content.

THE VIZ REPORTER solution provides the customer with a fully integrated solution, from video recording on the mobile phone, playback on the back-end server, and design of an optimal process for use in news production.

USERS CAN BROWSE the mobile phone's file system for multimedia content; editing tools enable them to trim videos recorded with the camera; stories can be created, geo-tagged and descriptive metadata can be added to the media. Afterwards the content can be uploaded in full quality via the mobile net or a WiFi network.

KEY FEATURES

- Runs on standard mobile phones

- Takes direct control of the mobile phone's hardware

- All hardware features available from within the client

- Support for predefined templates on mobile devices

- Allows video editing on the mobile phone

- Geo tagging on certain phones with GPS

- Uncompressed transfer of captured video to the Transcoding Server

- File size limited only by the storage capacity of the mobile device

- Easy addition of meta-information on the mobile device

- Captured video material is instantly available in the Media Asset Management system

ONCE CONTENT IS AVAILABLE on the Viz Mobilize Control Server, it can be prepared for online publishing, archived for future use or exported to other workflows.

THE VIZ REPORTER CLIENT application is supported on a wide range of Java-enabled mobile phones and on Blackberries. The latest release also runs on Apple's iPhone and iPad.

News in pocket size. Safdar Mustafa
is Head of Mobile Media at Al Jazeera.
Photo: Helge Skodvin

Powering the Arabic revolutions

No matter what. When Al Jazeera's journalists find it to dangerous to bring the camera to document riots and clashes with security forces, they bring out their mobile phone. And continue reporting. "It all boils down to avoiding restrictions on how events are documented. It's either nothing, or content captured with your mobile. Clearly the most important is to show what's going on, says Safdar Mustafa, Head of Mobile Media at Al Jazeera Network.

Al Jazeera has made a lot of video content captured via mobile available in an open ***creative commons*** repository. – *It's an integral part of our philosophy,* says Safdar Mustafa.

Power in a desert. Charging mobile phones in the desert is a real challenge. Plugging onto the car battery is the only available option. Al Jazeera reporter May Welsh.

"
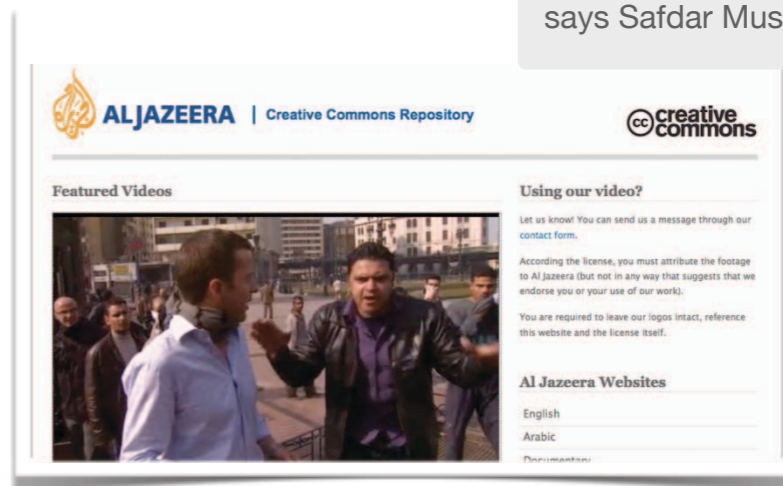
A bomb went off, with our reporters on-site. Without a camera, he grabbed his phone and filmed the destruction. Then he sent the material straight back to the news desk."

DURING THE MANY REVOLUTIONS
in the Middle East over the last couple of months, the Arabic and English speaking news organization has yet again demonstrated its leading position in the global media landscape. Mustafa recently held a keynote session in Bergen at an event hosted by Vizrt.

CENSORED AND ARRESTED.
To Al Jazeera, the mobile phone has become an important tool in order to avoid censorship and danger when reporting from countries such as Egypt, Tunisia and Bahrain where violent clashes and oppressive regimes

make life extremely difficult for journalists. "In regions where governments strike hard against news conveyers, the mobile plays an important part in gathering content. In some countries – at certain times – bringing a camera is extremely difficult," says Mustafa.

His employer has plenty of experience dealing with attempts to enforce censorship and make arrests. Egypt's former president Hosni Mubarak decided to have armed forces close down the Al Jazeera headquarters in his country, and reporters were not

allowed to travel to several Arabic countries, including Syria.

A MOBILE SOLUTION. By replacing the camera with a mobile, Al Jazeera now much more easily get footage and access to areas of conflict, without fear of having their equipment confiscated.

Mustafa himself was part of the first tests using a mobile camera a few years back. By placing a Nokia N95 on the dashboard of his Jeep, he drove around the streets of Doha, Qatar. When returning, his colleagues were impressed by the quality.

AL JAZEERA is an international news network based in Doha, Qatar. Founded by the Emir of Qatar, with $130 million invested in the startup. Plays an important role in opposition to government controlled news channels in the region. World wide audience of 50 million, approximately the size of the BBC.

"Most mobiles have what we need: a camera, support for transmitting data at high speeds and GPS localization. We did two tests. One was a planned trip documenting through the Sahara in Mali and Niger, where the reporter followed a group of rebels around closely. For us it was of paramount importance to quickly document happenings without bringing the big camera, says Mustafa.

"The second "test" was the real deal – breaking news. A bomb went off in Chad, and one of our reporters was on-site – but without a camera. He grabbed his phone and filmed the destruction and reactions afterwards. He held his mobile in the one hand and his press card in the other while recording. Then he sent the material

straight to the news desk from his mobile," Mustafa explains eagerly.

"During the demonstrations at Tahrir Square in Cairo in Egypt, it was very challenging to report from the ground," Mustada says.

"There were security forces of rebels, all dressed in civilian clothes – complete chaos. Walking around with

big cameras would be dangerous, not to mention bringing lots of heavy equipment."

A Funeral in Bahrain. Another scenario unfolded when one of Al Jazeera's reporters documented migrant workers fleeing from riots in Tunisia, back to their home country in Asia. Equipped with nothing but an iPhone, he managed to follow them onboard the plane and discreetly put together a story from their return trip home.

A third example comes from Bahrain. Al Jazeera reporter Ben Piven joined a funeral after a series of violent riots. The pictures he took were posted on aljazeera.com.

"This was at a time when it was very difficult to get hold of pictures taken from within Bahrain. Being able to use the mobile phone was very helpful", says Mustafa.

Al Jazeera uses a tailor-made version of Vizrt's mobile application; the Viz Reporter, designed by Vizrt. The app hands journalists the option of recording and edit video material directly on the mobile phone, add metadata and send it directly back to the news desk and its workflow.

Viz App Framework™

Great looking content on any device

There's no new media – it's all new consumption.

✓ Build applications for mobile devices

✓ Monetize content based on user profiles

✓ Publish to iTunes, Android Market or Windows Marketplace

VIZ APP FRAMEWORK helps online-publishers and media houses to turn online content into applications for mobile devices. These applications provide a native user experience on the latest tablet computers and smartphones. Native applications fully support all of the devices' capabilities, such as multi-touch interfaces, screen rotation and the highest possible resolution for video playback.

The user apps can be made available via iTunes, Android Market or Windows Marketplace either as free or paid apps. The applications can also support different methods of monetizing content.

Publishers can combine editorial content with advertising that can be automatically adapted to the device and the user profile. Applications also enable content access control, flexible download policies or an authentication system.

Viz App Framework works together seamlessly with existing Escenic Content Engine and Escenic Content Studio installations. Users can easily integrate an existing Escenic Content Engine system into Viz App Framework, but it is also possible to use Viz App Framework as a stand-alone product using only a runtime edition of Escenic Content Studio. Future releases of Viz App Framework will give customers the possibility to integrate third-party CMS systems as well.

Either solution enables publishers to cross-publish their full range of editorial material, such as texts, images, maps and graphics, using only one workflow. Further integration with

Viz Media Engine allows publishers to enhance their apps with additional video content. For operators and journalists the publishing workflow remains unchanged, with the app simply representing an additional output channel. All the usual preview and editing features are available when creating the app, making Viz App Framework one of the easiest ways of porting content to mobile devices.

SaaS Solution

Focus your resources where it really matters

Agile website development

✓ Stability and peak-traffic security

✓ Flexibility and high performance

✓ High end media platform with low operational costs

With the new Online SaaS solution, Vizrt offers media companies a key to shorter time-to-market, less strain on bottleneck-resources and a way to less frustration and better end user experiences.

The Escenic digital media CMS is specially developed to answer to the needs of broadcasters and media companies. A changing media landscape calls for multimedia publishing, live enhancement, single-point content creation, workflow integration, reuse of content assets and a strong focus on monetization, traffic and user analytics. This complex ecosystem needs to function together as a fine-tuned organism, just what Escenic is built to undertake.

ONLINE SERVICE. With hundreds of running installations at media companies around the world, Vizrt has extensive knowledge of how to optimize web site development. This knowledge is systemized and refined into a best practice that ensures agile development on a high profile website based on Escenic Content Engine.

PEOPLE. At Vizrt we want to help you succeed with your projects. In the last decade we have been part of many projects spread over the world and the one thing that we have learned is that the most important factor in any project is the people that make up the team and how they work together in an open, honest and focused fashion.

Our software supports a simple workflow that encourages all stakeholders to contribute beyond the strict boundaries of their roles without getting in each other's way.

CHANGE. The devil is in the details. And there is never enough time in a project to get all the details right before it is time to actually make them. The Escenic platform encourages teams to allow change to the very end. Examples of this are the ability to change content types and placement of GUI components after go-live as normal low-risk changes.

RELEASE MANAGEMENT. Websites are no playground anymore. They have to work – Always. The single biggest threat to the stability of any IT-operation is change. Vizrt offers a workflow that allows changes to receive appropriate scrutiny that is appropriate for the impact of the change.

With Escenic as a service, Vizrt combines the flexibility and high performance of an advanced online CMS with the dream of a worry free online-operation.

KEY FEATURES

• Stability & Peak-traffic security

• High-end multi media platform

• Less training needed

• Lower cost

• Lower time-to-market

• Easy upgrades

• Security

• Scalability

• Agile development
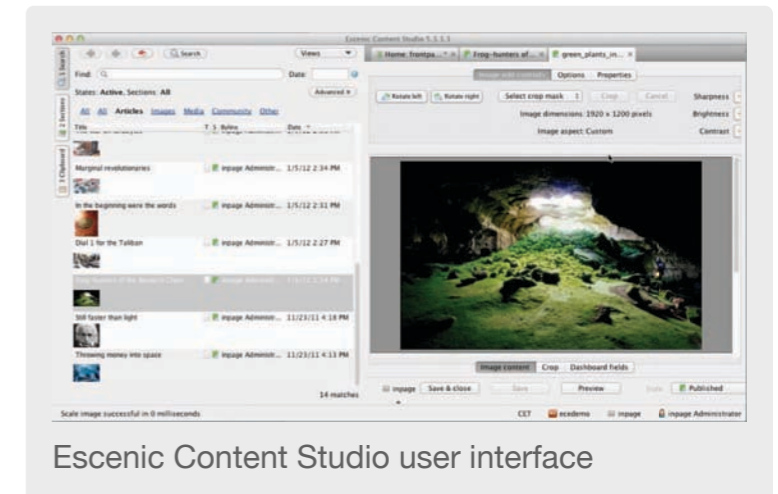
Escenic Content Studio user interface

Video

Video content comes from everywhere these days, not just from the professional videographer. Video content must also be easily accessible and distributed beyond the traditional channels. Vizrt provides tools to create, manage and deliver your video content easily from any source to any channel, all within the production tools media houses use daily.

THE VIZ MEDIA ENGINE is Vizrt's response to a rapidly evolving market requiring flexible solutions to video management and multi-platform distribution. We're essentially replacing our previous video hub and transcoding tools with a unique bundle designed to take care of the complete video workflow – from the camera situation, to final play-out on TV, web, phones and other devices. The solution's main goal is to provide customers with new revenue streams by ensuring that branded video content is easily managed and available on all distribution platforms.

COMPETITIVE ADVANTAGE. The transition to file-based workflows is the one trend that is most commercially important to businesses, according to the Big Broadcast Survey. The Viz Media Engine provides the answer to the multi-platform challenge. The Viz Media Engine offers a complete solution for online video publishing that integrates device adaptation, delivery to any online platform, reporting of video consumption, transcoding/encoding, and directly extends existing workflows for broadcast, graphics, editing and archiving.

MODULAR AND EXPANDABLE. The Viz Media Engine is easily expandable with modules for archiving and online publishing, including encoders, transcoders, ingest modules, editing clients, graphics insertion, storage, metadata handling, CDN delivery and much more. These tools manage the complete process from ingest all the way through to the online player.

The Viz Media Engine also provides a seamless workflow between SDI and file based systems. The same content can be edited and repackaged with graphics for both SDI play-out and online play-out. We offer tools both for ingest and play-out of SDI videos and transcoding and play-out online.

Viz Media Engine™

Produce Manage Deliver

VIDEO PRODUCTION PACKAGE

As multi-platform production becomes increasingly important, so does the job of managing your content from a single point.

✓ Import content from any device

✓ Control from a single point

✓ Adapt and deliver to any platform

Play and edit proxy video and create new clips to send back to Viz Media Engine

THE EASY WAY. Viz Media Engine opens up Media Asset Management systems to an entirely new spectrum of professionals within the broadcast and online media industry. With its intuitive design and well-documented features, new users can immediately benefit from the system's rich features on their familiar desktop PCs.

No matter how advanced a MAM system, it is only as good as the information it manages. Viz Media Engine is based on an efficient, industry-standard metadata model that anyone can keep updated. A typical workflow consists of a reporter ingesting into the workflow what he recently captured on tape in the field. VME Studio is the heart of the solution providing you with easy access to all material.

Viz Media Engine automatically generates scaled key frames from every video and image file and extracts embedded audio from video files. In the Viz Media Engine, searching is

supported during ingest, enabling you to finish your stories in the shortest possible time frame – with the greatest possible quality. Both free-text search and structured search are supported.

EDITING The Viz Media Engine production package comes with the well-known desktop editing applications Viz PreCut, Viz EasyCut, and Viz ShotCut (Mac). These tools enable up to 50 concurrent users to simultaneously cut video and create new clips.

For workflows that include craft editing, Video Production Package Extended features an advanced integration with Final Cut Pro or Avid.

HIGH AND LOW When new video files are ingested, Viz Media Engine

automatically produces two versions of each transferred video file: a low-resolution version for browsing and online editing, and a high-resolution version for export and playout.

PLAYOUT AND DISTRIBUTION Viz Media Engine can deliver video content to a variety of platforms and mediums, supporting standard interfaces to broadcast video servers. Similarly, you can use Viz Media Engine for online and phone publishing. It supports integration with streaming servers and with Escenic Content Studio, Vizrt's web publishing and content management system.

INTELLIGENT ARCHIVING At the core of Viz Media Engine is an intelligent archive system which moves media

around between storage areas of different kinds. When a user requests a media object, the system retrieves all parts of the requested object from long term storage, wherever they may be located. All complexity is handled by the Viz Media Engine system, allowing the user to focus on productive activities.

PACKAGES Viz Media Engine offers a flexible and complete solution for online video publishing that integrates device adaptation, delivery to any online platform, reporting of video consumption and transcoding/encoding. It directly extends existing workflows for broadcast, graphics, editing and archiving.

A Viz Media Engine setup is highly configurable and subject to individual preferences, but current customer requirements normally resemble one of our two standard packages.

ONLINE PACKAGE. The online production package gives a strong focus on online and mobile production. Video is transcoded and distributed to multiple mobile devices and web sites, thus ensuring an optimal end user experience. Search, browsing and proxy editing can be accomplished through integration with Escenic Content Studio or a third party CMS. The Viz Media Engine enables customers to publish all of their existing inventory to all devices and is built for scaling. The systems is ready to connect to CDNs and supports easy adjustable profiles for different connection speeds and terminals.

VIDEO PRODUCTION PACKAGE. The video production package enables collaborative video production for the workgroup or department via a web interface. Capabilities include file-based and SDI ingest, editing via proxy or third-party craft editors, archiving, searching, logging and browse preview. It integrates with numerous third-party products and supports a number of scalable storage solutions. This in combination with a comprehensive third-party API gives you an extensive toolbox to integrate with your existing systems and workflows.

KEY FEATURES

- Media Asset Management
- Ingest
- Search
- Editing
- Keyframes
- Playout & Distribution
- Control Server
- Video Transcoder
- Live Video
- Video Segmenter
- Streaming Server
- Live Video Rec.

SUPPORTED FILE FORMATS

.3gp / .aac / .flv / .m4v / .mov / .ogg
.vc1 /.3g2 / .amr / .gfx / .m4a / .mpa
.mfx / .wmv /.avi /.asf / .h263 / .mp3
.mpg / .rm / .wma / .ac3 / .dv /.h264
.mp4 / .mpeg / .ts / .vob

SUPPORTED AUDIO CODECS

AAC / AMR-NB / DV Audio / MPEG-1
(mp1,2,3) / Windows Media Audio
Pro / AC-3 / AMR-WB / orbis / PCM
(16,24,32 bit) / Real Audio

SUPPORTED VIDEO CODECS

Cinepack / DV Video / DVC Pro 25
DVCPro 50 / DVCPro 100/HD
Flash Video / H.263, H.264
HuffYUV, M-JPEG / MPEG-1, MPEG-2
(PS & ES) / MPEG-4/XVID / Microsoft
MPEG-4, ON2 (VP5,6) / Sorenson
Theora / VC-1, VC3/DNxHD
Windows Media Video (7,8,9), XVID.

SUPPORTED VIDEO FORMATS

HD

- 1080i50/59.94

- 720p50/59.94

- DV100/DVCProHD wrapped in MXF-Op1a

- DIF DNxHD wrapped in MXF-Op1

- XDCamHD 422

- wrapped in MXF-Op1a

- AVC-Intra wrapped in MXF-Op1a

SD

- DV25/DVCPro25/DVCam wrapped in MXF-Op1a

- DIF DV50/DVCPro50 wrapped in MXF-Op1a

- DIF IMX30/50 wrapped in MXF-Op1a

BBC Scotland upgrades to Viz Media Engine for advanced archive management

"

With Viz Media Engine, a user has all of their graphics in 2D and 3D, online tools, content publishing systems – all sitting in the middle of the workflow where he or she can integrate with all of the parts."

Zac Fields / Director of Graphics / Fox Sports

BBC Scotland broadcasts three DTV channels (BBC1 Scotland, BBC2 Scotland and the Gaelic-language BBC Alba) and two radio stations (BBC Radio Scotland and BBC Radio nan Gaidheal) to audiences in Scotland and Ireland.

With Viz Media Engine, other BBC affiliates will be able to access BBC Scotland's library of media from around the world. If a BBC employee in Manchester or Afghanistan needs a clip from BBC Scotland, they can access that.

Viz Media Engine is a powerful workflow solution that goes beyond asset management to include support for content distribution via multiple platforms. Its feature set includes tools for ingest, search, categorizing media, proxy editing, archiving, and automated transcoding of media into formats suitable for broadcast, online, and mobile publishing.

Users can search for a piece of video by using a word or key phrase – just as you would in a Google search. A new search engine provides the speed and ability to search for content using key words. Users can also filter search results using criterion like transmission dates, rights managements and other parameters. The system can filter and refilter search parameters and add words as a search is further refined.

The new user interface is significantly faster and is particularly aimed at making users find the right content quickly – by enabling users to both scrub through video, update search queries and view new results directly from the search results – near instantly.

"Everyone searches like Google now, and people expect search results with Google-like speed and search functions," said Petter Ole Jakobsen, chief technical officer for Vizrt. "And that's one of the most important aspects of archiving now – speed and search parameters."

As a test of the speed of its system, Vizrt imported the entire contents of Wikipedia into Viz Media Engine as metadata, with each Wikipedia article as an asset. The search speed was faster than milliseconds. That speed is due to both the search engine used and the architecture that Viz Media Engine is based on.

The transition from Ardome to Viz Media Engine at BBC Scotland began in May 2012 and will culminate at the end of this year. During this transition, Ardome metadata will be converted to Viz Media Engine's newer and more expanded metadata schema that enables faster, more effective searching and categorizing of media assets. While Viz Media Engine is being installed alongside Viz Ardome, which has been in use for four years now, BBC Scotland will switch over to the Viz Media Engine exclusively when the transition is completed.

Viz Media Engine fully integrates with BBC Scotland's Avid NewsCutter editing system, Avid InterPlay media management system, and other Avid systems, and the assets and file formats are MXF-compliant. BBC Scotland's

journalists will be able to browse, access, and manage content in the digitized database using a Web-based interface.

In searching for an asset, such as a particular soccer or tennis match, Viz Media Engine can quickly locate that asset as well as others that are similar or relevant to that request. The journalist can perform proxy editing – marking in and out points – to indicate the portion of the footage that is of interest. The clip can then be transferred to the NewsCutter where an editor can edit it in high-resolution and drop it into the news rundown or other upcoming broadcast productions.

Viz Media Engine also interfaces seamlessly with other Vizrt products in the workflow, including systems for the creation and playout of live graphics to air. Since BBC Scotland's broadcast facility has Vizrt graphics products in its production chain, such as the Viz Engine realtime HD/SD media server, they are well positioned to fully utilize the Viz Media Engine for multiplatform content distribution when they're ready.

"Other MAM products just don't do asset management as fast or as smart," explained Jakobsen. "With Viz Media Engine, a

user has all of their graphics in 2D and 3D, online tools, content publishing systems – all sitting in the middle of the workflow where he or she can integrate with all of the parts."

The user interface of Viz Media Engine shows task lists and workflow steps, making it easier to search for an asset and resolve a task. For archivists with what could be 1,000 tasks every day, everything that comes into the system must be validated and logged. When a task is closed, users can designate if it's archived to all or restricted or deleted.

BBC Scotland is also getting a rights management subsystem within Viz Media Engine that's been rewritten from scratch. It enables considerable flexibility in determining who can view and what they can view and do with video assets. For example, a group of users may be restricted to only look at metadata and keyframes, and may or may not be able to view and browse but can't move an asset to another location. It provides a much more secure environment for programming, and the system can be used as a rights management tool as well.

"We're extremely pleased that BBC Scotland has expressed continued confidence in Vizrt and our next-generation Viz Media Engine. Our team is working very closely and diligently with BBC Scotland's media management department to ensure that their decades worth of precious media and metadata are protected and the transition to Viz Media Engine is seamless," concluded Jakobsen. "For broadcasters like BBC Scotland, sophisticated media asset management tools, such as searching, browsing, and proxy editing, are the key to unlocking the true value of their notable media archives."

VME Studio™

Say hello to our brand new journalist tool

VME Studio instantly searches your archives for the content you need using keyword and filtered searches.

✓ Proxy video previews and edits

✓ Easy to use interface lets you navigate to different types of content

✓ Search refining filters lets you work smarter and faster

FAST ACCESS is the key to getting more out of your material – and to being able to serve your audience with breaking news. Having gathered your material, the clock really starts ticking as soon as you start ingesting. If your media asset management solution isn't up to speed, chances are you'll see it on the news somewhere else first.

Enter the new VME Studio, where all the steps of publishing are done from a single point. By using proxy video, search, browse and editing is faster than ever.

Through the web interface of Viz Media Engine, you can instantly find your material and get a quick overview of the clip through the video thumbnails. Most importantly, it can all be done

while the material is still being ingested – enabling you to finish your story in the shortest possible time with the greatest quality possible.

Inside the browser, the revamped VME Studio's main display is divided into several areas. Searching in VME Studio is simple and powerful. The Quick Search box is on the Title Bar and is available regardless of the current page. A major feature of VME Studio is advanced filtering and refining of search results. The Refine button appears at the top of the Search Results page. Results can be dynamically filtered with a few clicks.

SUPPORTED FORMATS

- DV25 wrapped in MXF-Op1a or DIF (PAL/NTSC)

- IMX30/50 wrapped in MXF-Op1a (PAL/NTSC)

- DV100 wrapped in MXF Op1a or DIF 1080i50/59.94, 720p50/59.94

- DNxHD wrapped in MXF Op1a 1080i50/59.94, 720p50/59.94

- XDCamHD 422 wrapped in MXF-Op1a (1080i50/59.94) AVC-Intra wrapped in MXF-Op1a (1080i50/59.94).

Editing Tools

# The Vizrt video editing workflow
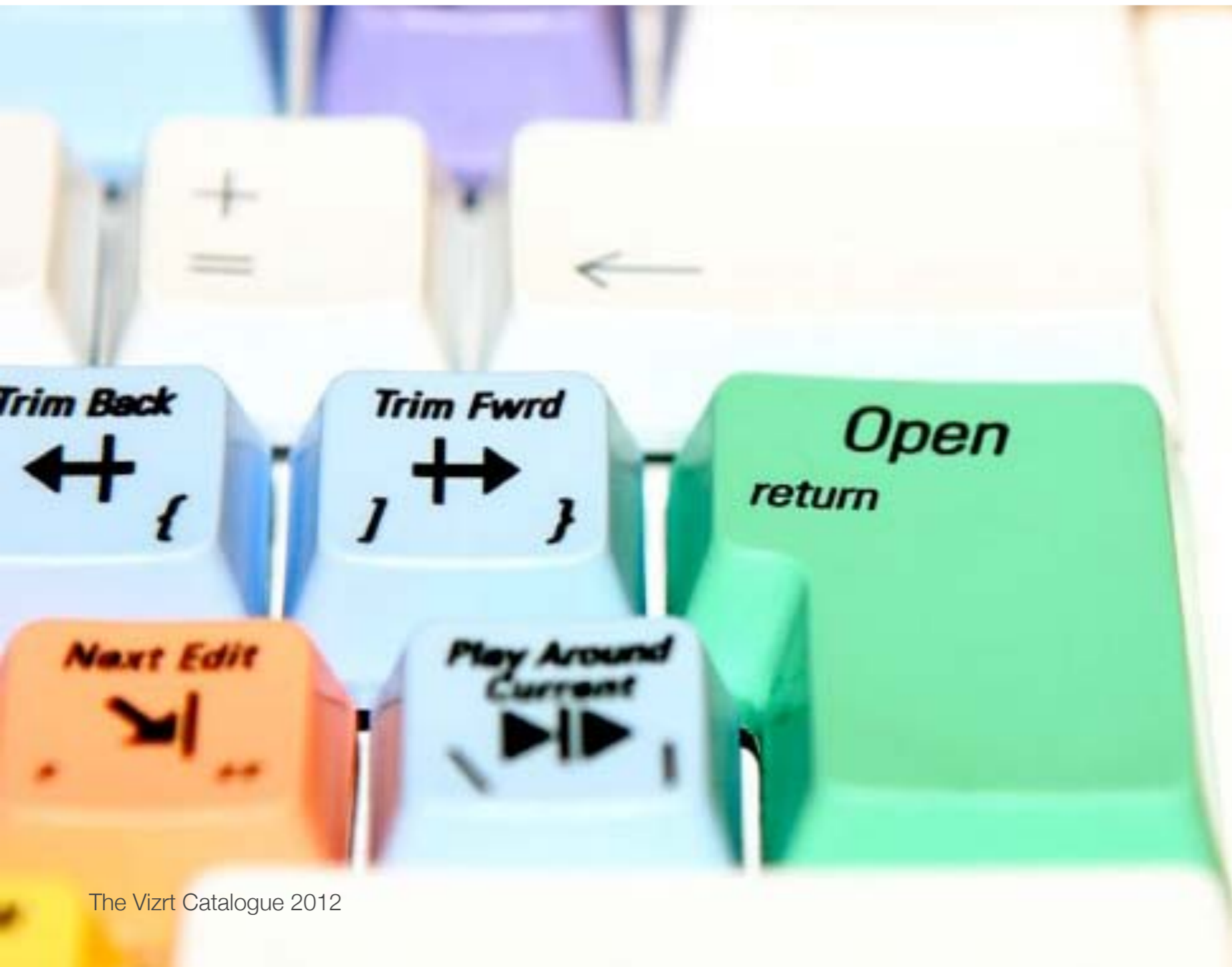
Vizrt provides solutions for editing workflows of all types. Built to optimize the video workflow experience and provide the right tools for the right job.

- ✓ **VIZ EASY CUT™** is the complete editing tool for journalists
- ✓ **VIZ PRECUT ™** is proxy video editing allowing for editing low resolution versions of video files
- ✓ **VIZ SHOTCUT™** is an easy to use low resolution video editor for the Mac

THE FIRST PART OF YOUR EDITING JOB is to find the material and select the clips you need to tell the story. Searching, thumbnail browsing and watching clips in a video player are all easily accomplished inside the Viz Media Engine.

Having located the clips you need, there are basically two paths to take: Either use our integrations to drag the material into your favorite editing suite, or continue with Vizrt's tools for rough cutting or editing. If you prefer to handle your content in Final Cut Pro or Avid, simply import the high-res clip into the editor. They both integrate with Viz Media Engine, ensuring easy import and export of your material.

Viz PreCut user interface
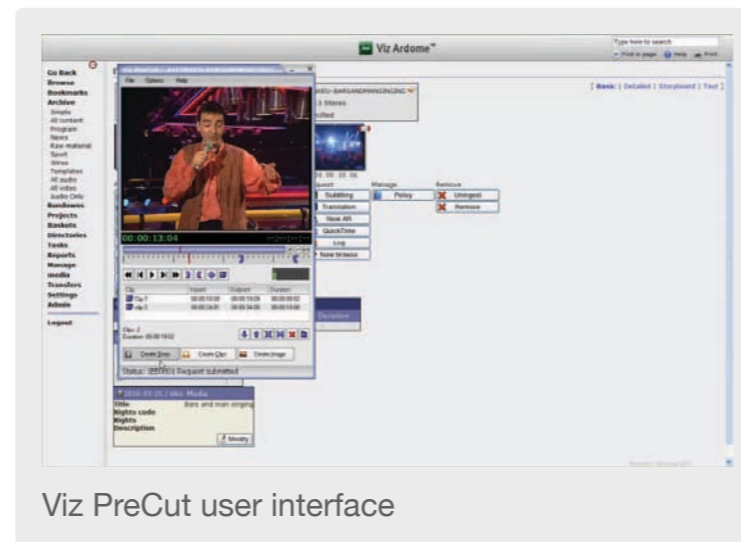
As always, the option of staying inside the Vizrt workflow exists. If you prefer to edit your material with our own tools, Viz PreCut (PC) and Viz ShotCut (Mac) will do the job for you. The crucial advantage here is working with a very light application. Combined with proxy video, the process is fast and efficient – even on a journalist's limited laptop or when a slow office network sets the pace.

Once your list of clips is complete, submit it as a new story and the Viz Media Engine will handle the back end processing. The initial story is created and no time is lost rendering the clip. The content can also be opened in Viz EasyCut with better tools for controlling editing and audio control. Another option is keep working on your rough cut in your preferred editor.

As the initial editing is done, the second part of editing consists of how to add and time graphics. Vizrt offers two options: either the graphics are added in real-time as the story is played out during production, or the graphics are added to the package itself.

If you prefer adding the graphics to the package yourself, but still want a consistent branding, you should look into Viz NLE. The plug-in is available for video editing software such as Avid, Final Cut Pro, Adobe, and Quantel, giving the user a template interface like Viz Trio for filling in data, text and pictures. The plug-in is dragged to the time line and adjusted to fit your required timing. A central server will quickly provide the editor with the necessary sequence of pictures populated on the time line. The end result is a fast template-driven graphic with a consistent look and feel in line with the rest of your branding.

Should a journalist only need to time a graphic for real-time play-out, Vizrt now has a new tool available as part of our newsroom plug-in. Once video has been found in Viz Media Engine, you can easily launch it in the time line editor. A wide selection of templates is available, leaving it up to the user to fill in a template with the required information. Check the final composition with the preview option, save the graphics and the package is generated during production and played out in real-time.

In total, Vizrt's toolbox helps make a journalist's day more productive, empowering him to produce more stories in less time, and at the same ensuring better quality and consistent branding.
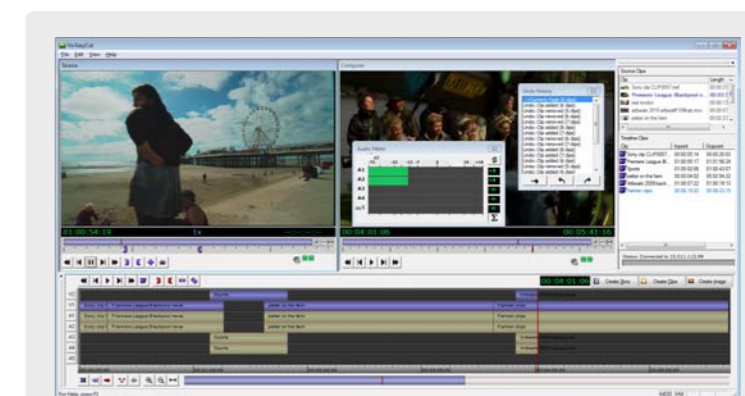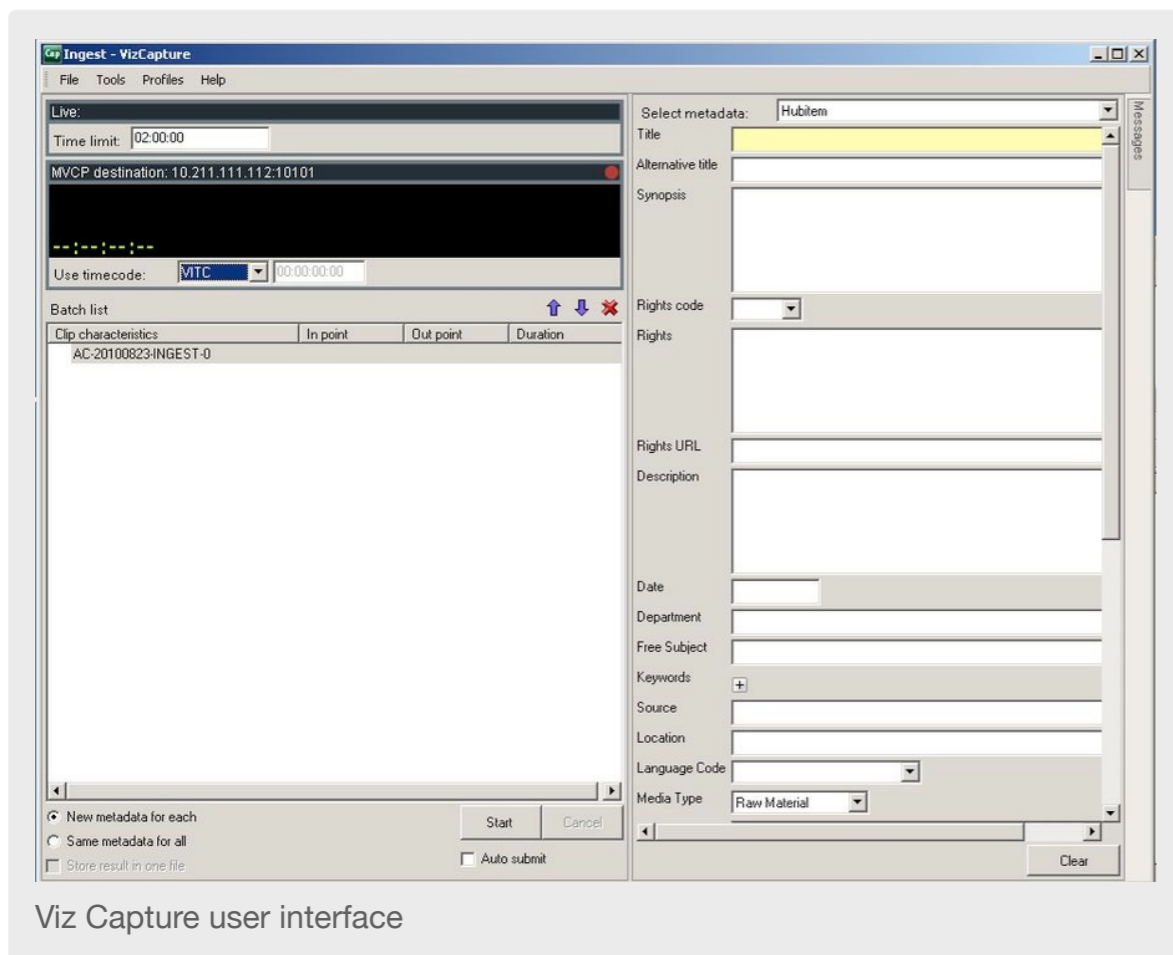

Viz Easy Cut user interface

Viz Capture™

Enabling ingest and output

Content comes from everywhere. Viz Capture grabs ingest streams with accuracy and flexibility.

✓ Ingest from live feeds, tape based and video servers

✓ Edit content during ingest

✓ Multi-channel playout

Viz Capture user interface

Viz Capture is a tool for digital content acquisition from video tape recorders and live feeds. It produces frame-accurate recordings that can be fetched whilst data is still being recorded, and simultaneously allows the editing of such data during ingest. It also supports batch-ingest from Videotape Recorders (VTR), copy-to-tape functionality, and multi-channel play-out.

Viz Capture provides open interfaces for integration with media management solutions, ensuring simple integration with new and existing workflows. Viz Capture can notify other systems of actions by sending XML formatted events to interested parties. Viz Capture can be integrated with Viz Dart to ensure efficient resource allocation and router control.

Viz Dart™

The digital automated recording tool

The digital automated recording tool, Viz Dart, has a web-based interface for recording video from a wide range of live and feed sources and making it available for immediate use. It provides easy drag-and-drop style graphical editing of scheduled recordings. Viz Dart is capable of automatically ingesting from any number of video servers and media channels into a multi-server environment; for replay and editing on demand.
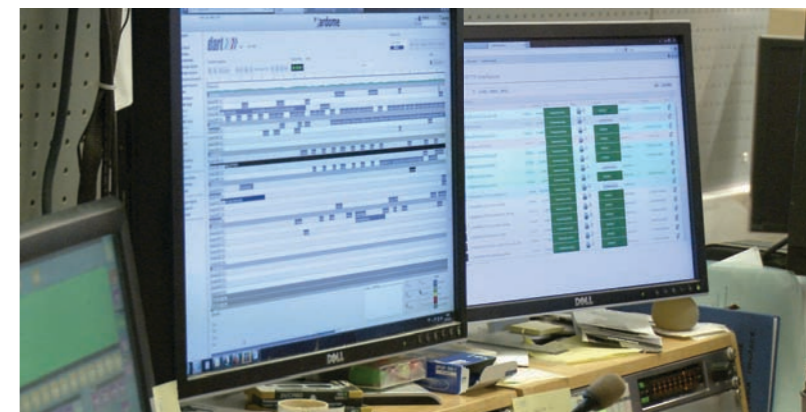
SUPPORTED VIDEO SERVER PROTOCOLS:

• VDCP

• AMP

• Quantel

• CORBA

• VDCP

• AMP

• Quantel

• CORBA

• MVCP

• Vortex

• Omneon API

SUPPORTED VIDEO ROUTERS, INCLUDING:

• Nvision NV9000

• Grass Valley 7000

• Philips Jupiter

• Quartz Q16XX

• Utah 300 and Aurora versions

Viz Video Engine™

Broadcast live video recorder

Viz Video Engine is a flexible video server capable of:

✓ Four channels of selectable HD or SD recording per 1U chassis

✓ Enables SDI acquisition in Viz Media Engine

✓ Cost-effective and easy to implement

The Viz Video Engine is a cost-effective broadcast live video recorder for SDI acquisition. The recorder is controlled and managed by our Media Asset Management system, Viz Media Engine.

A single engine handles four channels, each capable of recording files from an extensive selection of HD and SD broadcast video formats. All video is wrapped in the MXF format, stored locally and made accessible through an FTP interface. Files are automatically moved and transcoded to centrally managed storage by Viz Media Engine. This means assets can be searched, previewed and edited from Viz Media Engine – even while recording is still ongoing. Once recording completes Viz Media Engine automatically deletes unwanted media.

FEED ACQUISITION. For feed acquisition, the recorder is controlled by our feed scheduler, Viz Dart. An operator makes a booking for recording of a particular source feed and enriches it with metadata, using Viz Dart's scheduling client. Viz Dart monitors the schedule, controls the recording and notifies Viz Media Engine of the new asset. Once notified, files are automatically moved and transcoded to centrally managed storage by Viz Media Engine. This enables searching, previewing and editing of the feed from within Viz Media Engine within a few seconds of feed acquisition starting, and while it is still ongoing.

TAPE INGEST. For tape ingest, the recorder is controlled by our capture utility in Viz Media Engine. The tool opens as a desktop client that can control most standard types of VTRs. The ingest operator specifies the required in and out points, adds metadata and starts the recording. For efficiency, a list of clips can be ordered as a single batch job. Both VTR and recorder are controlled by the utility, which also notifies Viz Media Engine about the new asset. At notification, files are automatically moved and transcoded to centrally managed storage by Viz Media Engine. This enables searching, previewing and editing of the tape in Viz Media Engine within a few seconds of tape ingest starting, and while it is still ongoing.

KEY FEATURES

- Four video channels of selectable HD or SD recording**

- Compact 1U rack-mountable chassis

- Broad video, audio and data compatibility

- 6TB useable RAID storage

- Supports MXF-Op1a format

- FTP interface for easy file-based media exchange

- Hardware redundancy for fail-safe reliability

- Video channels can also be used for clip playback

VIDEO

HD Video (MXF OP1a)

- AVC-Intra 50 / AVC-Intra 100

- DVCPRO HD / DVCPRO 100

- XDCAM HD422 50

SD Video (MXF OP1a)

- DV 25 / DVCPRO 25 / DVCPRO 50

- IMX 30 / IMX 50

AUDIO

- 16 / 24 bit PCM audio @ 48 KHz

DATA

- EIA-608 / EIA-708 Closed Captioning

- VBI / VANC Ancillary

MAM Enterprise Solution

Solution based on Viz Media Engine

Efficiency comes with experience

✓ Enterprise-grade Media Asset Management

✓ Access from every desktop and mobile device

✓ Collaborate between multiple departments and sites

✓ Make your own media with our APIs

✓ Scale to to reach new audiences
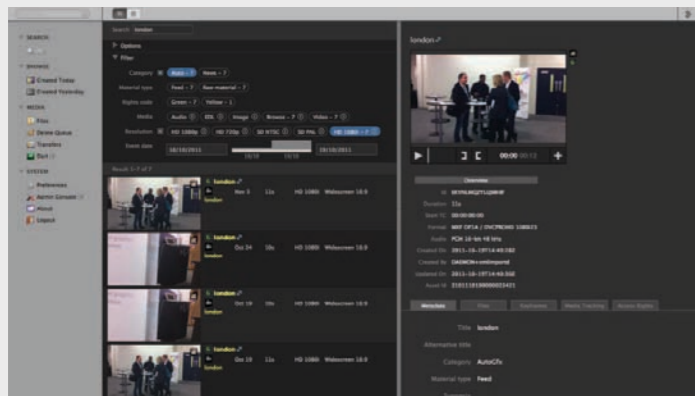
Extremely fast search and filter help you find your content immediately

The Enterprise Solution for Media Asset Management from Vizrt is based on Viz Media Engine. The previous iteration of the solution was known as Viz Ardome. It includes several Vizrt tools and products, which cover different tasks – from tape ingest and video editing to branding and multi-platform delivery. The solution integrates with leading systems for non-linear editing, scheduling,

newsroom, playout, traffic, automation, analytics, and content delivery networks. Several mechanisms, such as APIs and event-based architecture, ensure smooth integration with your existing third party systems.

WHAT IS ENTERPRISE MAM REALLY FOR? Real MAM is more than just a database with a web frontend. We wanted to make all the daily tasks of media management, from ingest to editing and playout, not only easier, but also more efficient. For instance, users can check the availability and status of media files directly from their desktop. They can instantly see if media files are being used in other contexts, when a file was last used, and if special restrictions apply. After

finding a suitable file, users rough-cut it right on their desktop. There is no need to assign subtasks to other departments and this makes the whole workflow more efficient. Allowing resources to be freed up for other tasks. This helps everyone across the business work together as creatively and efficiently as possible.

MORE THAN A DECADE OF EXPERIENCE. Since first installed as an Enterprise Solution in 2001, the Vizrt team has gathered valuable experience in planning and delivering enterprise-grade MAM projects. The collective Vizrt expertise is at your disposal. We can help, throughout the entire project, to ensure successful implementation for all project sizes. How much support you want is completely up to you; our

services range from basic installation support to delivering full turn-key solutions.

COLLABORATE BETWEEN MULTIPLE DEPARTMENTS AND SITES. The solution can be accessed by all your staff - whether a few hundred to many thousands - across multiple departments and sites. This, combined with our task lists and workflow orchestration, gives you greater visibility and control of media production across the business.

To meet these requirements, the core of our solution is designed to meet a broad variety of uses, ranging from typical broadcast usage, for example fast-paced news production, to specific usage in other markets such as playout to multiple devices, or long-term preservation of media assets. Special product capabilities and integration points are a common requirement. Our Solution Architects will help design and create a solution that meets all your needs - be it highly specialized programming workflows or building a gateway to new media implementations.

MAKE YOUR OWN MEDIA APPLICATIONS WITH OUR APIS. The feature-set is also easy to extend, thanks to access to core functions via APIs for storage management, metadata handling, search, workflows, and user management. Using the APIs, optional features are realized by product extensions and integration that enhance the solution.

SCALE TO REACH NEW AUDIENCES. Nobody can say for sure what the technical requirements for a media asset management system will be in five years time. It's good to know then that the solution can be scaled to address all demands to a future system. The size of the database itself is virtually unlimited. You need to store years and years worth of video material? Not a problem - our largest installation to date easily supports 2.6 Petabytes (2,600,000 Gigabytes) and there's still room for future growth.

IN SUMMARY. The Enterprise Solution provides a flexible and powerful end-to-end workflow to effectively enhance the value of your media.

Sports

Vizrt takes sports seriously. That's why our products are made for the fast pace of sports-related broadcasts. Even though the setting varies from sport to sport, the common goal is the same: making the most out of the available content.

Vizrt is constantly looking for new ways of adding value to sports-related content. Together with our customers we develop new products and workflows that help you excel at your game.

To provide you with the most comprehensive software and hardware package, Vizrt Sports has also teamed up with leading players in the sports broadcast sector. In cooperation with developers and media houses from all over the world, we create systems that cater to the dreams of the most demanding sports enthusiasts. In front of the screen, as well as in the stadium.

The acquisition of LiberoVision adds an extra dimension to your pre-game, half time, in-game, and post-game analysis. Supporting seven different sports, Libero Highlight offers the market's most sought-after 3D replays, while the brand new Libero Playbook makes the same tools available during the game itself. In addition, Libero Offside elegantly visualizes any disputed offside decision in soccer.

Did you know that all of NASCAR's...

...mobile video content is handled by Vizrt? So is the 2011 Cricket World Cup and Norwegian TV 2's sports content. The PGA Tour Android application also uses the Vizrt Viz Media Engine to power their mobile video offering.
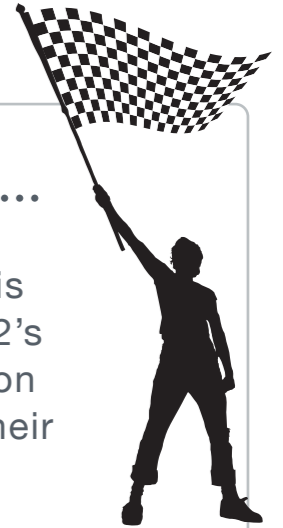
Our portfolio also consists of 2D to 3D Conversion Developer Stergen, taking you to the next level of sports broadcasting.

Setting up an extensive sports archive. It may all begin with a live broadcast, but the story continues long after. New Sports TV channels, online video, as well as Internet sites focusing on mobile media content are boosting the demand for material covering past events.

LiberoVision

Hands-on sports analysis

▶ **WATCH THE VIDEO**

Fully acquired by Vizrt, LiberoVision provides integrated hardware and software products to generate unique 3D imagery for several types of sports broadcasts.

✓ Realistic 3D replays

✓ Powerful analysis tools

✓ Unique perspectives bring viewers in the game

FULLY ACQUIRED by Vizrt, LiberoVision provides integrated hardware and software products to generate unique imagery for several types of sports broadcasts. Despite its relatively short history, the Swiss company has received a series of prestigious awards. Why? Because LiberoVision is the global leader for 3D virtual sports enhancements. Based on existing TV images only, Libero Highlight and Libero Offside generate the perfect perspective for analyzing interesting or controversial scenes. The vision is to provide sports fans with unlimited insights into sport games. Our newest product is Libero Playbook, offering 3D game analysis in less than 60 seconds. Broadcasters around the world, such as ESPN, NBC, BBC, ZDF,

Sky Italia, and Televisa use LiberoVision to enhance their sport analysis. LiberoVision's technology is available for football, American football, basketball, ice hockey, baseball, rugby, and handball.

REMOTE PRODUCTIONS.
Libero Highlight, Libero Playbook and Libero Offside come as one-box-solutions for easy integration into your remote production. No additional infrastructure is required inside the stadium. All processing is image-based.

Thanks to full integration with EVS protocols, setup time at the stadium is less than 30 minutes. Synchronized camera feeds available at your remote production make selection and preparation of LiberoVision clips as easy as possible.

STUDIO PRODUCTIONS. Is access to a multilateral feed the only option in your studio? Or do you only have a clip compilation available? No problem for Libero Highlight. Thanks to a full image-based processing, Libero Highlight is a perfect tool for studio productions. Use any source (EVS, Quantel, tape, …) and a clean signal as input and generate perfect 3D flights and perspectives from your headquarter. Setup time is below 30 minutes and production teams are

impressed by the ease of integration. The new Libero Playbook also opens up for making deeper analysis part of the ongoing game itself. Depending on your setup, basic annotations from our selection of in-game analysis could go live on air in as little as 30 seconds, perfect right after a short commercial.

LIBERO HIGHLIGHT provides realistically looking 3D replays and advanced virtual graphics for sports broadcast. Analyse interesting or controversial scenes from the perfect perspective. Seamlessly combine eye-catching 3D replays with sophisticated tracked telestration to provide your viewer with stunning game insights. Give your experts the ultimate tool for illustrative sports analyses.

LIBERO OFFSIDE resolves the emotional offside question by a 3D flight onto the offside line within seconds after the incident. Libero Offside is based on the well-established, Emmy nominated 3D sports analysis technology of Libero Highlight. Its slimmer design allows for an incredible turn-around time of only few seconds, still providing the stunning

3D analysis flight from its bigger brother. Go beyond the classical offside line to a conclusive, realistic, 3D linesman's perspective. Use the eye-catching and decisive offside view as instant replay during the game. Making this view even more spectacular, Libero Offside provides a full 3D flight into the linesman angle.

LIBERO PLAYBOOK is a ultra fast version of Libero Highlight, offering 3D game analysis in less than 60 seconds. Is your broadcast about to go to commercial? Is the game suddenly interrupted by injury or a time-out, or the referee needs a minute with his assistants to decide on a difficult call? Now you have the tool to tell the stories – as the game unfolds – at your fingertips. Depending on your setup, in-game analysis could now go live on air in as little as 30 seconds. LiberoVision's powerful 3D annotations works in the same way as Libero Highlight, seamlessly combining your camera feeds to generate that world-famous flow. Explain the X's and O's in prime time, creating a special bond with your die-hard viewers.

A wide range of sports

Handball / American, Australian & Canadian football / Basketball / Rugby / Volleyball / Baseball / Soccer / Hockey / Tennis / Cricket / Volleyball / Beach volleyball / Field hockey

SPORTSHUB lets your audience be part of the action. Vizrt's and LiberoVision's integrated and interactive studio solution. Customize your analysis graphics and templates, control the analysis clips via Vizrt's workflow, or use the iPad / touch-screen to run your interactive studio show. In addition, a lineup tool is available in the Sportshub – also controllable via the iPad.

Integration with Viz Engine and Viz Trio means Vizrt already supports bringing Libero Highlight clips into your Vizrt workflow. You can have your talent start the analysis

discussing crucial aspects of the game when the analysis is paused in a revealing birds eye position. We also offer an interactive studio application allowing your Viz Engines to interactively show arrows on the field, highlight certain players, and explain their movement

FILE-BASED WORKFLOW. Libero Highlight allows both ingest and output to be performed via baseband video (SDI) or file transfer. Libero Highlight operators can choose video files from a media asset management system (MAM) like Viz Media Engine, directly load them into Libero Highlight and create stunning highlight clips including unique 3D effects. This allows for an easy integration of Libero Highlight into any tapeless studio environment.

GRASS VALLEY K2 INTEGRATION. Libero Highlight integrates with Grass Valley's K2 Summit media server and K2 Dyno replay system. The full integration of the two systems allows generating the 3D analysis clips both in remote and studio productions, even if only a multi-lateral feed is available from an event.

Vizrt and LiberoVision analysis tools take centre stage at 2011 Stanley Cup Finals

"

LiberoVision provides a unique, tactical perspective that helps us take the audience inside the glass and give them the best seat in the house."

Sam Flood / Executive Producer / NBC Sports & VERSUS

As the hockey world fixes its eyes on the final act of the NHL season – the Stanley Cup Final between the Boston Bruins and Vancouver Canucks – the Zürich-based sports analysis company LiberoVision plays an important role in illustrating to viewers the many why's and how's tied to player decisions.

Now fully part of the Vizrt workflow and supporting seven different sports, including soccer, American football and ice hockey, the award-winning Libero Highlight one-box solution allows broadcasters to produce realistic 3D replays without the need for additional infrastructure.

Based on nothing more than your existing TV images, Libero Highlight instantly grabs the viewer's attention and lifts sports analysis to a whole new level, says Julia Vogel, Sales and Marketing Director at LiberoVision.

LiberoVision's patented image processing technology instantly transforms the camera feeds into realistic 3D representations that allow viewers to essentially fly over the playing field to review key moments in the action from the best possible perspectives.

In the US, NBC Sports and VERSUS, both members of the NBC Sports Group, are using Libero Highlight for 3D replay analysis during the best-of-seven games final. In Canada, The Sports Network (TSN) is using Libero Highlight's interface to visualize tactical aspects of the game. TSN is Canada's leading, English-language sports TV channel.

LiberoVision is a great tool that better allows us to tell the story of the event, says Sam Flood, Executive Producer, NBC Sports and VERSUS.

It provides a unique, tactical perspective that helps us take the audience inside the glass and give them the best seat in the house.

VERSUS has been using Libero Highlight for live, on-air replay analysis of its games since the 2010 NHL playoffs. Before this year's Stanley Cup Final, NBC featured Libero Highlight during its 2010 Vancouver Olympic Games hockey coverage and for the 2010 NHL playoffs. TSN are primarily using Libero Highlight for post-game analysis and various shows tied to the Stanley Cup Final.

LiberoVision's realistic 3D support for analyzing key moments of the game, changing from one camera to another while always keeping the essential players clearly visible, is a great example of how broadcasters can now highlight game-changing decisions better than ever before, says Paul Graham, VP and Executive Producer, TSN.

Libero Highlight has already been well received by broadcasters around the world. The software has been used at the 2010 FIFA World Cup, other high-profile soccer events, for NFL and NCAA football, Major League Baseball, NHL hockey games, as well as NBA and NCAA basketball coverage.

LiberoVision 3D sports analysis tools enhance live EURO 2012 coverage by broadcasters Worldwide
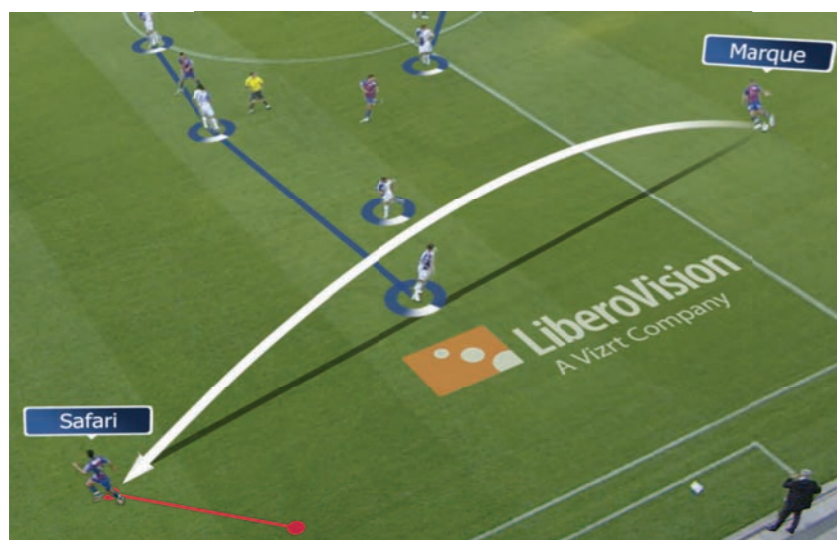
Right in time for the kick-off of one of the highest profile sport events in the world, the 2012 UEFA European Football Championship (EURO 2012), LiberoVision, a Vizrt company, launched version 5.0 of its flagship product, Libero Highlight. As over 100 million viewers worldwide watch 16 European nations vying for the title, various broadcasters around the globe are utilizing LiberoVision's 3D sport analysis software to break down the game's key moments.

"

Libero Highlight 5.0 reflects once again LiberoVision's innovative spirit. Broadcasters are keen to air novelties like the Virtual Run, Panorama Stitch, and utilizing the Sports Hub during this summer's sports blockbusters."

Stephan Würmlin Stadler / CEO / LiberoVision

Among the prominent broadcast networks that are covering EURO 2012 with Libero Highlight: ZDF Germany, TV2 Denmark, TV2 Norway, Globosat Brazil, Medcom Panama, TSN Canada, and TVP Poland. During their live coverage, these broadcasters and others will use Libero Highlight 5.0— the latest version of LiberoVision's powerful 3D virtual replay system.

SENSATIONAL 3D REPLAYS. Libero Highlight provides realistic 3D virtual replays and advanced branded virtual graphics that help viewers understand pivotal game action and controversial plays. Utilizing live camera signals and video clips captured by any video server system, Libero Highlight's

interactive toolbox lets sports commentators replay the action and apply 3D effects and telestration.

Initiated by a 3D camera flight, this exclusive image processing technology takes the viewers to vantage points that cameras never captured, such as a referee or linesmen view, on the goal line, or from a bird's eye perspective.

The new features are available not only for football but also for: American football, basketball, baseball, ice hockey, rugby, and handball. The coming version, Highlight 5.1, will incorporate volleyball and beach volleyball. Vizrt is already seeing enthusiasm from broadcasters that intend to use Libero Highlight for the upcoming Summer Olympics as well as other major sporting events.

FLEXIBLE OPERATION. The broadcasters using Libero Highlight for EURO 2012 coverage are all taking advantage of its flexibility. Some position it at the International Broadcast Center (IBC) in Warsaw, while others are using it from the studio headquarters in their home countries using live camera feeds backhauled from the EURO 2012 stadiums. Some

commentators operate it interactively from its intuitive user interface; others control it via an Apple iPad using Viz Anchor, other Vizrt control software, or LiberoVision's iPad

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LIBERO HIGHLIGHT FEATURES AND CAPABILITIES:

- Virtual run, which visualizes where and how one player may run in a given play while the remainder of the players are held in a freeze frame

- Panorama Stitch, which brings all parts of a stadium together for a full, panoramic, 3D stadium virtual view

- Vizrt export to design customized graphics and interactively playout clips via Sports Hub

- 3D Offside Blade for a clearer separation of offside players

- Greyboard to highlight selected players in a vivid color on top of a greyed field

- iPad control of the Libero Telestrator

- Editable graphics playlist to quickly post process clips

- Faster operation and enhanced annotation features

Telestrator with dynamic on-set display on touchscreen monitors and videowalls.

For example, German broadcaster ZDF is operating the Libero Highlight 5.0 from IBC in Warsaw, Poland. Analysis clips are be transferred back to their open-air public viewing studio on the Usedom Island in Germany. ZDF is using the Vizrt Sports Hub in Usedom to ensure tight integration with the Vizrt live graphics workflow at its network facility. The anchors playout and telestrate the highlight clips from the games interactively using a touchscreen and an iPad, both running on Sports Hub. TV2 in Norway is using Sports Hub and Highlight 5.0 from its Norwegian studio. TV2 in Denmark is utilizing Highlight 5.0 from its EURO studio on a houseboat in Copenhagen. Sports commentators there control Highlight 5.0 using an iPad to enhance live game analysis.

WINNING VIEWERS FOR TELEVISED SPORTS. "Highlight 5.0 was highly anticipated by broadcasters producing live coverage of EURO 2012," said Petter Ole Jakobsen, chief technical officer for Vizrt.

"In covering such a popular event, broadcasters know they must employ state-of-the-art tools and techniques to ensure a visually dynamic production. What's remarkable is how each of these EURO 2012 broadcasters will be using the same product in such different ways. This is a testament to Highlight 5.0's versatility, flexibility, and cost-effectiveness."

Sports Hub solution

Powerful sports analysis

The ultimate combination of analysis and design

✓ Integration of branded 3D graphics and sports analysis

✓ Telestration with a touch screen or an iPad

✓ Playlist control of analysis clips via Vizrt workflow

Let LiberoVision and Vizrt give you the edge for your sports coverage. Libero Highlight, Vizrt's 3D replay and analysis system is uniquely integrated with Vizrt's interactive graphics workflow creating the Sports Hub solution.

Send Libero Highlight 3D replay clips directly to the Viz Engine and play out LiberoVision clips directly from scenes created in Viz Artist as part of the Vizrt graphics.

Related metadata can accompany the clips so that 3D calibration and keying information is available at playout on the Viz Engine. This allows for tied-to-field graphics using powerful, customized Vizrt graphics. The integrated workflow is a one-stop

sports solution that gives you complete control of your sports content

Libero Highlight's integration with the Vizrt platform offers countless new possibilities to present, enhance, and or distribute sports analysis clips.

LIVE TELESTRATION. Interactively telestrate the 3D analysis clips with a touchscreen or an iPad by using Vizrt's control software letting your analyst only perform the telestration he needs while other graphics are played-out automatically.

Combine interactive telestration with team line-ups, tables, scores, standings, or statistics, giving your presenter ultimate control and your audience an immersive and dynamic sports program.

COMPLETE CONTROL. Control the video flow of the 3D analysis clips and regular highlights using the Sports Hub, or allow Viz Anchor to take control with full preview capability and your sports presenters can drive the show. Clips can be added to playlists in Viz Trio or Viz Content Pilot as part of a larger scene with real time 3D graphics enhancing the clip presentation. Using the EVS plugin of Viz Engine, you can also directly control EVS clips in your studio show.

VIRTUALLY IN THE PLAY. Integrate Viz Virtual Studio with Libero Highlight and place your analyst onto the field with the players in action. For example, the analyst can then commentate besides the goal post or even among the players.

Training

Professional grade tools need skilled professionals to make the most of them. Vizrt offers comprehensive training programs for every product and skill level.

Simple steps to stardom

The Certification Program is offered worldwide to recognize the quality and level of all Vizrt software users. Our certified professionals are growing and we look forward to expanding our community further. Our plan is to offer a certification program for all our software.
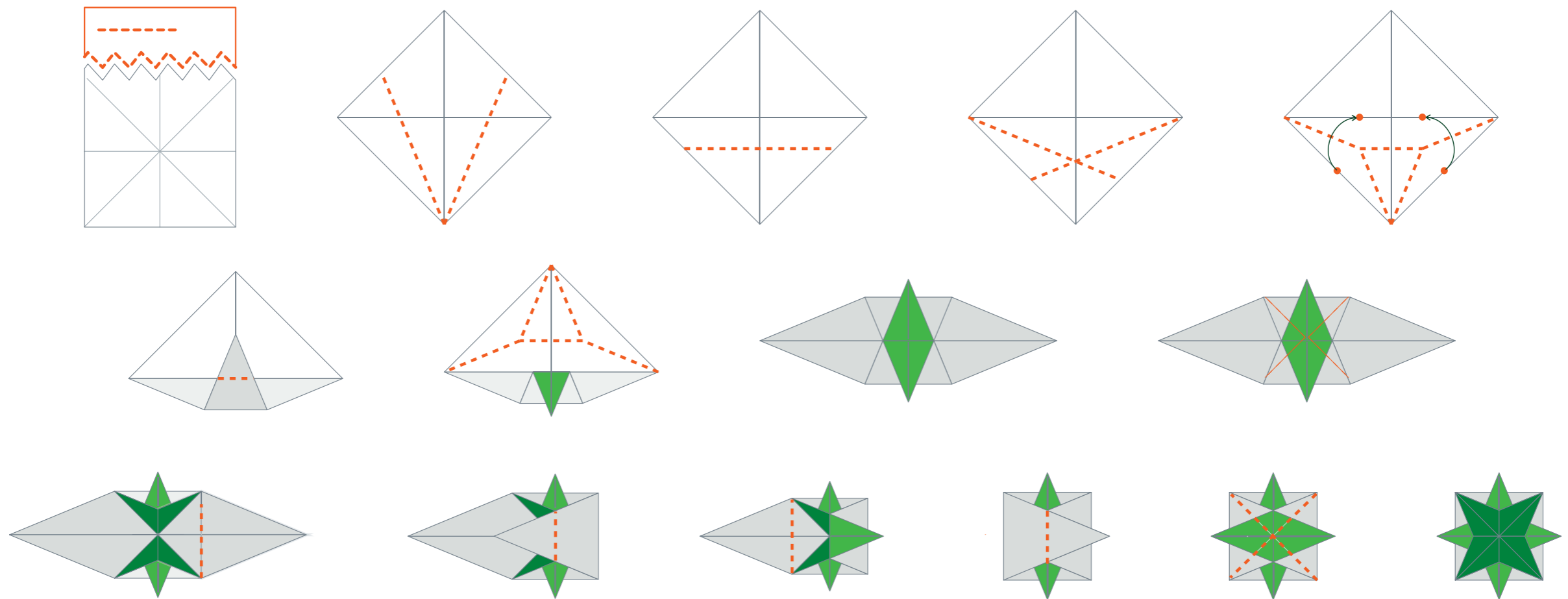
> " *I think that to be professional one always needs an academic evaluation, plus it raises our self-esteem and serves as recognition in our professional environment.*"

Hugo Meza Yañez / Head of Graphics / Canal 13 / Chile

THE VIZ TRIO OPERATOR EXAM is developed to test user competency in Viz Trio system's core functions, how to edit shows, create playlists and scrollers, and use templates for creating data elements. Once certified you have proven that you can operate Viz Trio and that you understand the Viz Trio operator's role in relation with other integrated systems used for content creation, output and graphics design.

The Viz Trio operator exam is a multiple choice online exam that requires the monitoring of a Vizrt representative. Each student has 60 minutes to complete the exam.

THE VIZ ARTIST DESIGNER EXAM is a bundled package of scenes and instructions issued from the training center. The examinee has a one-month period to complete instructions and return for examination.

To pass you will demonstrate a high level of knowledge and organization skills using Transition Logic, Scripting and Technical Design setup. You can take a project from consept to a set of graphics ready to be controlled by either Viz Trio and/or Viz Content Pilot and understand how solutions can be executed in a larger team together with designers, IT personnel or programmers.

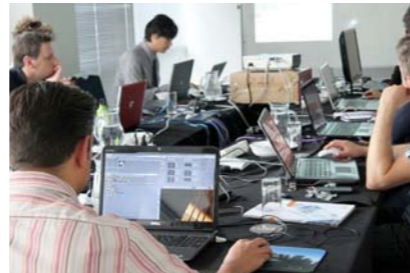Take the challenge! Simply go to vizrt.com/support/training
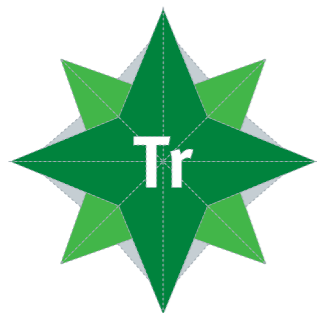
Pay if you pass

It's totally free to try out the Viz Trio operator exam. Simply go to vizrt.com/support/training

Viz Guru – Bringing the community together

Viz Guru is a training event designed to accommodate all advanced training courses combined with one day of inspiration of the "Latest & Greatest". This is a one day presentation where participants will have the opportunity to discover what's hot in the Vizrt world, take a close look into new projects, new plug-ins, and Pixel FX.

VIZ GURU is a training event designed to accommodate all advanced training courses combined with one day of inspiration of the "Latest & Greatest". This is a one day presentation where participants will have the opportunity to discover what's hot in the Vizrt world, take a close look into new projects, new plug-ins, and Pixel FX.

The Guru event is designed to make the best even better, creating a worldwide community of Vizrt users not only for communication and relationship benefits but also to recognize their level of expertise. Since the first ever Viz Guru event in Dubai, late November of 2008, Vizrt has hosted 15 Gurus in 13 countries and the community of Viz Gurus is continuing to grow! We hope to expand the Gurus

even more frequently over the next coming years in order to develop a global community of super users.

Typically our Guru's have been focused on advanced Artist training, by offering Viz Artist designers new features and power user practices in Viz Artist 3. Guru lessons have included Viz Scripting, interactive scene design, advanced Transition Logic, and data pool. We look forward to expanding these super training events to cover the whole range of Viz Software.

All Gurus come with a variety of training material, bonuses and giveaways. T-shirts, kits, training dvds are all part of the training extravaganza, plus everyone receives a Guru attestation! In particular

participants can also take any certification exam for free two months following any Guru event.

Viz Guru training participants are essentially requested through invitation only. Nevertheless, to be apart of these events and increase your skill presence as a designer you can always request invitation to a Guru in your area at training@vizrt.com

Vizrt has installations in more than 80 countries spread across six continents, powering more than 3,500 TV channels and more than 600 Internet media sites. It's our local presence in all the major markets around the world that makes this possible.
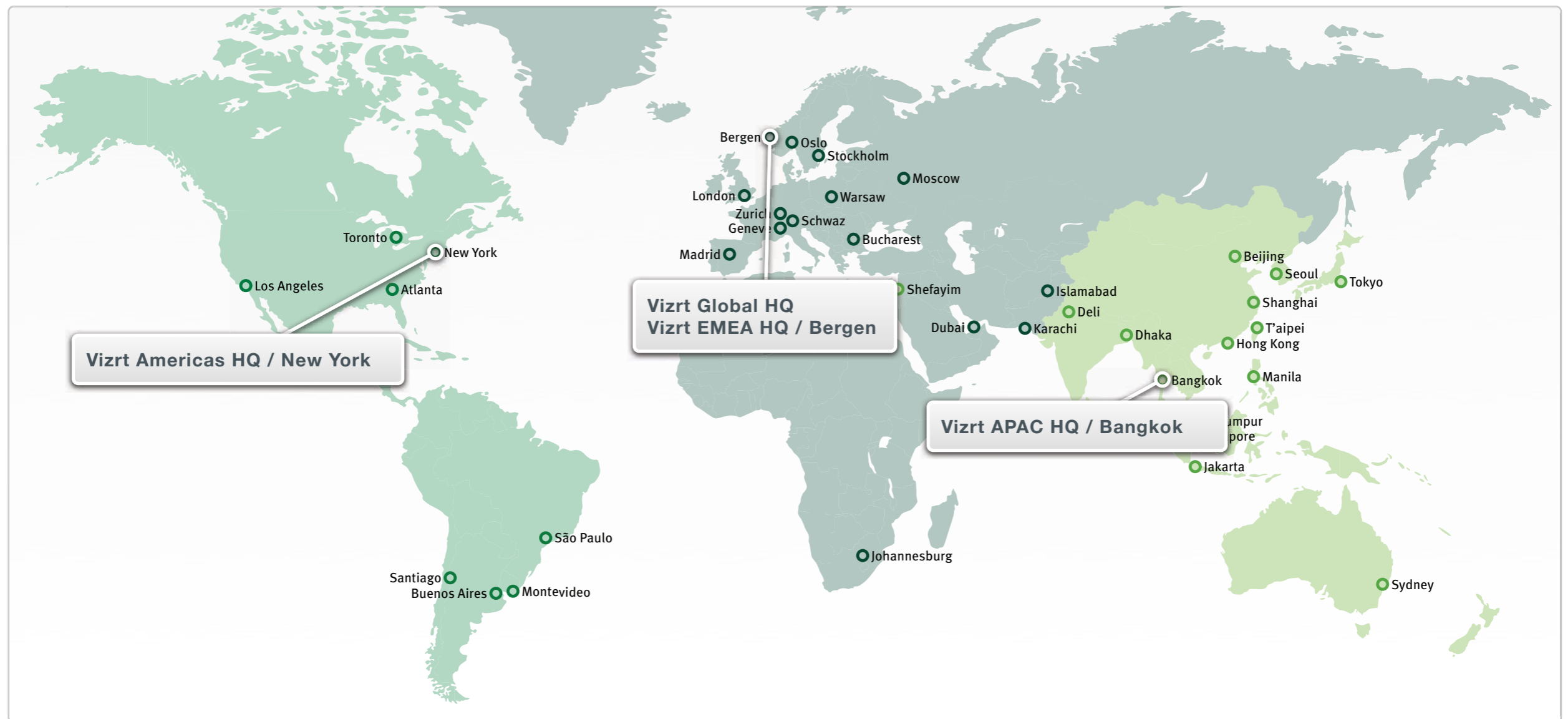
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