Exterity is firmly established as the global leader in enterprise IPTV. Exterity systems are deployed globally by some of the most recognized brands in the world, enabling the distribution of broadcast quality digital TV and video over IP networks to an unlimited number of end points. With centralized management, configuration and control, Exterity solutions support large volumes of content and devices without compromising system performance or availability.

Organizations and corporate entities across the finance, education, hospitality, media, transport, energy and healthcare sectors use Exterity to create enhanced IPTV experiences and develop revenue streams such as targeted advertising or in-room on demand viewing.

System Integrators all over the world rely on the interoperability of Exterity solutions with specialized third party applications such as hotel management systems, patient information services and Flight Information Display Systems to provide revenue generating industry specific enterprise IPTV solutions.

TV and video channels can be delivered wherever there’s a network connection, to personal computers, standard TVs, digital AV projectors, interactive whiteboards, digital signage or any other video display device. Channels, end points and users can be added virtually without limit - an Exterity IPTV solution provides fine grained control over what content is available, where it can be displayed, and who can see it.
**Corporate & Finance**
Real time and on-demand broadcast Companywide

**Broadcast & Media**
Monitor output and stay in tune

**Maritime & Energy**
Keep crew better connected to entertainment and training

**Venues & Stadia**
Stay competitive on and off the field of play

**Transport & Terminals**
Video and digital signage integrated for terminals and hubs

**Hospitality & Leisure**
Increase guest loyalty, satisfaction and resort revenue

**College & Campus**
Build accessible video libraries of teaching materials

**Health & Residential Care**
Enhance patient, visitor and staff information and entertainment experiences

**Products & Solutions**
Create, play and control content over IP with Exterity products and solutions
Corporate & Finance
Live TV and on-demand companywide network video
Corporate and Financial institutions around the world use Exterity IPTV solutions to distribute live and archived news, on demand content, training materials or to relay companywide briefings and events to public screens and employee desktops over their corporate network. Headquarter and satellite offices screen live international high profile televised events to any networked end point, track breaking news on trading floor screens and stream world events straight to individual screens.

- Preserve Internet bandwidth by delivering TV from a central point on your network, rather than as multiple streams across your Internet gateway
- Deliver live and on-demand video to corporate desktops and public screens
- Provide live news and information feeds to decision makers
- Keep staff up to date and provide entertainment in common areas
- Archive training materials and corporate updates for on-demand playback
- Continuously record important TV output to excerpt news of interest to executives and staff for playback or on-demand viewing
- Create corporate information channels using live or recorded material
- Deliver information to visitors via integration with digital signage platforms
- Control content access by user, group or location

**Exterity systems deliver real time broadcast in HD without compromising quality**

<table>
<thead>
<tr>
<th>Broadcast Capture</th>
<th>HD Encoding</th>
<th>IPTV System Control</th>
<th>End Point Reception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AvediaStream TVgateway</strong>&lt;br&gt;Stream live TV over an IP network. Descramble encrypted content using in-built CAMs &amp; simultaneously stream SD &amp; HD channels.</td>
<td><strong>AvediaStream Encoder</strong>&lt;br&gt;Takes AV sources &amp; makes channels on the network. Supports dual MPEG-2 to MPEG-4/H.264 encoding.</td>
<td><strong>AvediaServer</strong>&lt;br&gt;AvediaServer IPTV management system provides advanced functionality for scheduling, content storage, playback and VoD.</td>
<td><strong>AvediaPlayer Receiver</strong>&lt;br&gt;Discreet, robust &amp; reliable HD ready STB. Customizable per individual or group of receivers.</td>
</tr>
</tbody>
</table>

**AvediaServer**


**AvediaPlayer Receiver**

Discreet, robust & reliable HD ready STB. Customizable per individual or group of receivers.
Worldwide drinks group uses Exterity to deliver multimedia and brand image around stylish new offices

SABMiller is one of the world’s largest brewers, with a brewing presence in over 40 countries across four continents; a portfolio of strong brands and market leading shares in many of the countries in which it has brewing operations.

Outside the USA, SABMiller plc is one of the largest bottlers of Coca-Cola products in the world. When planning their operations expansion, SABMiller wanted video technologies that matched their facility’s ‘Wow’ factor and having one network, with the ability to run IT, telephony and AV seamlessly across it was crucial.

“One day was more than enough for initial test; the Exterity products were so comprehensive and easy to use we knew straight away that this was going to be the solution for us.”

Roger Chappe de Leonval, IT Manager, SABMiller

Challenge
Traditionally, all AV is piped into a building using coaxial cabling, which is expensive to maintain and slow to deploy. Furthermore, it requires a completely separate system and could not run off a single infrastructure network, which was a prerequisite for SABMiller. Exterity was recommended to SABMiller as specialists in delivering networked AV over IP.

Solution
Straight away Exterity presented the ideal solution as other network AV products proved difficult to use and had heavy back-ends. Before moving into the offices, SABMiller commissioned a one day trial of Exterity AvediaStream TVgateway and AvediaPlayer Receiver, which together enable the distribution of multimedia material such as video, TV and DVDs through the network. To get internal buy-in, SABMiller IT Team presented the solution to the building team, with positive feedback from the team, the installation partner was given the green light to start deployment.

Roll Out
The Exterity solution, rolled out in two days, extended SABMiller’s Ethernet network. TVgateways enabled stream terrestrial broadcast feeds across the network. Exterity Receivers were added to televisions and plasma displays for direct end point access to all available digital media.

Result
The system enables any media stored on the network to be streamed to meeting rooms, an impressive communal atrium area, bar area and cafeteria. The SABMiller team decided it would stream company brand identity, positioning and advertisements to the atrium, bar and cafeteria area. SABMiller uses the rest of the screens to stream news, sport and entertainment, important monitoring resources for employees to know what is happening in the world. Delighted that not only did the Exterity system allowed SABMiller to stick to their one network infrastructure policy, it helped to create the ‘whoa’ factor that they really wanted from their new offices and has been a vital tool promoting brand identity with employees and visitors.

External broadcast
Terrestrial channels

Internal video source
Branded content

HD streaming over AvediaStream TVgateways
IP Network
AvediaPlayer Receivers feeding TV’s & Displays
Product Spotlight

AvediaStream c1110 Chassis

Exterity largest and most advanced IPTV chassis supports 10 blades with built-in redundancy

AvediaStream chassis are all hot swap enabled allowing removal and replacement of AvediaStream blades without the need to power down the whole unit, saving time and avoiding disruption to other blades operating in the same environment.
Broadcast & Media
Monitor output and stay in tune
Many Broadcasters presently use Exterity solutions to distribute video around television studios and production galleries, enabling peer review of content via individual or shared screens. Commercial and marketing teams can monitor competitor output and track live and breaking news at their desktops with tailored portals and multiview screens.

With IPTV solutions from Exterity, there are no limits. Every screen can be supplied with an unlimited number of high definition channels over an existing IP network (LAN) and have control over what content is available, where it can be displayed, and who can see it.

- Distribute video from broadcast quality cameras and equipment using SDI interface
- Enable peer review of content via individual PCs or shared public screens
- Deliver programming around studios, production galleries, visitor areas, editing suites and direct to individual desktops
- Build an archive of live and acquired recordings for future scheduled broadcast or video on demand

Exterity systems can presently be found in many of the world’s most respected broadcasters, content producers and operators.

**Ensuring HD quality for exacting broadcaster and operator requirements**

- **Broadcast Capture**
  - AvediaStream TVgateway
    - Multiple channels from a single blade
    - Free to air and encrypted content
    - DVB S/T/C
    - ASI, ATSC, Clear QAM
    - g4345

- **HD Encoding**
  - AvediaStream Encoder
    - Stream live HDSDI / 3GSDI signals from your broadest cameras & production desks
    - e3655

- **IPTV System Control**
  - AvediaServer
    - Monitor & control access to assets to ensure effective delivery throughout your organization

- **End Point Reception**
  - AvediaPlayer Receiver
    - HD Video playout on TVs with real-time unit to unit sync
    - r9200
International news agency Reuters cements 2500 employees reputation as leading source of intelligent information for business with constant connection to global news

As an international organization, it is essential that staff at our headquarters have instant access to television from all over the world. The Exterity network IPTV solution gives us this in an innovative and cost-effective way

Matt Hassock, Technical Manager, Reuters.

Challenge

Reuters aging coaxial TV distribution system couldn’t keep up with corporate growth and demand for video distribution and was too hard to integrate with staff desktop computers. The existing system wasn’t scalable, adding users was difficult, requiring lifting floors and running new cables, and tended to degrade picture quality. This made it difficult for Reuters to add new employees and quite expensive to expand in to additional offices.

Reuters Goals

- Provide employee desktop access to world news channels and internal broadcasts
- Leverage existing network technology to simultaneously deliver live broadcast and existing business applications
- Eliminate obsolete, redundant coaxial video distribution system
- Enable easy scalability to accommodate growth

Solution

Reuters found its solution in an Exterity IPTV system, which uses Reuters’ existing IP network to stream crystal clear live TV from all over the world to over 300 displays in conference rooms and lecture theatres, as well as 2,500 screens and desktops around the office with no need for additional cabling. Channels are supplied from a single satellite dish; keeping investment in additional signal reception equipment to a minimum.

Result

Reuters employees have instant, desktop access to over 60 digital satellite, terrestrial and internally produced channels enabling them to stay on top of all news, in real-time. By using the existing IP network, operational costs are lowered and demands reduced on Reuters IT Administration employees to manage an additional network just for TV and video. As a fully scalable solution, the Exterity system is future proofed for the addition of channels and end points.

60 Live broadcasts  Internal Feed Encoding  Multiple Public Display  2500 Desktops
AvediaStream TVgateway g4315 in an AvediaStream Chassis c1101

Descramble and distribute free to air and encrypted content from two satellite sources simultaneously
Maritime & Energy
Keep crew better connected to entertainment and training
Maritime, oil and gas facilities including supply vessels, crew accommodation and drilling platforms - where space and structural integrity are at a premium - benefit from Exterity IPTV solutions as they operate over existing IP networks usually found already delivering broadband connectivity, internet and telephony services.

Whether for accommodation associated with a drilling site or a vessel used to transport manpower to support the exploration process, Exterity systems keep crews connected to the outside world with news and entertainment, display staff notices and deliver training via video.

- Provide information, news, entertainment and foreign language TV and radio to crew accommodation
- Create an archive of training and safety videos for on-demand viewing
- Deliver video-on-demand entertainment for crew
- Provide announcements and emergency information via digital signage
- Stream footage of offshore activities to onshore HQ

Within the energy industry, operational sites and associated crew camps are often remotely located, which can affect employee acquisition, retention and motivation. In order to prevent possible negative impact Exterity works with many energy companies and their project partners to design systems to provide entertainment for employees living away from home.
Shell, a global group of energy and petrochemical companies, is one of the largest and most recognized in the Oil and Gas industry. Located in more than 70 countries and territories and with around 87,000 employees world-wide, their focus is on exploring for new oil and gas reserves and developing major projects.

**Challenge**

By providing video entertainment to their crews, Shell aimed to improve camp morale and minimize employee turnover. They understood that deploying video services over the existing IP network infrastructure would be the most expedient way to achieve the required TV channels, movies and video services.

The company chose an Exterity solution for live, on-demand and recorded secure distribution of digital content, integrating Exterity IPTV technologies directly onto the existing network, thereby avoiding additional network investment and minimizing disruption of services already being delivered across it.

**Solution**

The system implemented features a wide range of Exterity products, configured to create a flexible end-to-end IPTV system including; AvediaStream Satellite TV gateways to capture both free to air and encrypted channels; AvediaPlayer Receivers which have unique Power over Ethernet capability – critical selection criteria for energy sector customers – advanced channel management and admin web interface functionality; all centrally managed through the powerful multiservice AvediaServer for system monitoring, control and administration.

**Roll Out**

The Exterity system has been deployed in public spaces throughout the camp, including dining rooms, office, relaxation and communal spaces, providing base personnel with easily accessible entertainment when they want it.
Product Spotlight

AvediaStream Encoder e2320
Dual encoder, streams simultaneously from two independent content sources
Venues & Stadia
Stay competitive on and off the field of play
IPTV from Exterity keeps sports teams and venues competitive on and off the field of play. As a leading provider of enterprise IPTV communication solutions, Exterity has a great deal of experience of extending the action from the pitch, court, pool, track and stage. In an increasingly competitive marketplace, stadiums, clubs and entertainment venues are under pressure to provide entertainment that delivers an outstanding experience for fans, staff and corporate guests. Exterity enterprise IPTV is enabling venues and teams to communicate a dynamic mix of information, updates, clips, scores and live footage of the sporting action to exceed the expectations of fans and visitors.

- Deliver live camera coverage of events to screens around the stadium
- Create a personalized TV and video experience for guests in hospitality suites
- Provide visitor information, concession advertising, scheduled events announcements, and emergency information via digital signage
- Advertise future events to generate higher ticket sales

Stay competitive on and off the field of play and enhance fan experiences

With Exterity IPTV, venues can create their own internal TV channels showing highlights, exclusive pre and post-game coverage, access other on-site event camera feeds and venue related services via customizable, branded interfaces. This breadth of content presentation and delivery options enables venues to deliver fantastic experiences for visitors, while providing a far more powerful means with which to promote corporate sponsors and advertisers – giving them a real edge over their competitors.

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<tr>
<td>AvediaStream TVgateway</td>
<td>AvediaStream Encoder</td>
<td>AvediaServer</td>
<td>Artio Middleware</td>
</tr>
<tr>
<td>Satellite &amp; terrestrial live TV capture with closed caption support.</td>
<td>Encode live camera feeds directly from the field of play.</td>
<td>IPTV system management for changing between live coverage, pundit replay content or tournament/event messaging &amp; statistics during intervals.</td>
<td>Use Artio middleware products to display stadium/team branded TV.</td>
</tr>
</tbody>
</table>
Leading IPTV

The Grand Stade de Lille was constructed as an alternative to the two other main stadia in France, the Stade de France in Paris and the Vélodrôme in Marseille. As its main functionality is to host sports events such as football and rugby matches, as well as concerts by internationally acclaimed artists, streaming live video to the 50,000 attendees was a key priority to ensure the public can watch all the action as it unfolds. The selected IPTV system needed to be integrated into the stadium’s AV offering including audio, stadium and hospitality screens, digital signage and AV monitoring.

In order to distribute video to all 215 end points around the stadium, the pro-AV installer and events specialist partner deployed an Exterity IPTV system including satellite and terrestrial TVgateways, HD encoders and AvediaPlayer Receivers all managed through AvediaServer. The IPTV installation transfers DVB-T and DVB-S signals and provides a single User Interface to monitor activity on the network and schedule content playback efficiently. Additionally, AvediaPlayer Receivers fitted with an Ethernet port and an HDMI output receive and decode a large number of SD and HD IPTV streams. In addition to broadcasting IPTV streams, the Exterity system integrates with digital signage to offer additional information in real time.

The Exterity system was integrated into the stadium’s global AV system and put to use immediately upon completion. The system carries both live feeds and programs and is able to decode and transcode SD and HD signals, enabling sports and music fans to enjoy the action taking place in real time, whether they are near the field or in hospitality rooms. The Exterity IPTV system is currently used to broadcast all the venue’s concerts and sporting events, and will be instrumental in airing the Euro 2016 tournament matches.

| AvediaStream Terrestrial & Satellite Gateways | AvediaStream H.264, SD/HD/SDI/3G Encoders | Enterprise AvediaServer/ Schedule, record, playback and archive storage | 215 AvediaPlayer Receiver end points |

Broadcasting the action happening on the field and stage is a prerequisite for all stadiums and venues. However, the sheer size of the venues creates challenges for pro-AV installers as they require multiple end points around the premises. In order to distribute live feeds and video programs in real time, installers need to use an IPTV system that can scale and process various signals at once without degrading the image. These considerations led to the installation of an Exterity IPTV system at Grand Stade de Lille, maximizing the impact of the sports matches and concerts hosted, including the upcoming Euro 2016 championship.
AvediaServer c1510 platform

The c1510 hardware platform contains a single media disk in a compact 1U rack mounted package, ideal for small to medium enterprise IPTV environments.
Transport & Terminals

Video and digital signage integrated for terminals and hubs
With Exterity systems, you can distribute travel information, announcements, concession advertising, and entertainment throughout your facility over your existing IP network. TV and video channels can be delivered wherever there’s a network connection, to flight information displays, personal computers, standard TVs, digital signage, or any other video display device. Channels, displays and users can be added virtually without limit, and Exterity open standard development facilitates full interoperability with Transport Information Systems.

- Deliver flight information as channels on the network
- Eliminate requirement for separate PC’s to drive displays, greatly reducing operational costs due to lower power and cooling demands
- Provide live TV to waiting areas in terminals and transport hubs
- Keep passengers entertained and informed, enhance the transit experience and increase satisfaction
- Advertise concessions, tourism information and local attractions to generate additional revenue

Multiple video options for terminals and passenger transportation hubs

**Broadcast Capture**

*Exterity AvediaStream TVgateway*

Distribute live TV news & weather updates to minimize potential travel disruption & keep passengers informed.

**HD Encoding**

*Exterity AvediaStream Encoder*

High performance dual HD & MPEG signage & channel encoding.

**IPTV System Control**

*Exterity AvediaServer*

Control & manage asset playback & maintain links to emergency situation management protocols.

**End Point Reception**

*Exterity AvediaPlayer Receiver*

Physically secure, low carbon footprint STB to display live TV, passenger entertainment & signage to enhance the on-screen passenger experience.
The Spanish Airport Authorities wanted to modernize the communication systems in terminals across Malaga, Seville, Madrid, Barcelona and Alicante airports. They chose an integrated solution combining Exterity IPTV with digital signage technology. The end result was an impressive, scalable and easy-to-upgrade system delivering IPTV and digital signage over the LAN.

**IP Video Solution**

The airports IPTV system architecture includes an Exterity AvediaStream c1110 chassis, with the security of a redundant power supply, and the ability to hot swap IPTV modules. The chassis hosts DVB-T gateways which stream channels from local DTT services and DVB-S/S2 gateways, with integrated CAM slots, which descramble encrypted channels from satellite services. AvediaPlayer Receivers are mounted on TV screens and monitors around the terminal displaying channels brought to the airport network.

An AvediaServer located in the airport communications room provides control of the Exterity IPTV system with the ability to store thousands of hours of on-demand and scheduled for play content.

**Digital Signage Integration**

Taking digital signage player output and turning it into an IPTV channel on the network means it can be viewed by any Exterity IPTV Receiver attached to a display; a solution which is much more cost-effective than having a digital signage player attached to each end point display. To put the digital signage player signal onto the IP network, a converter turned the VGA player output into a PAL video signal, then is encoded by an Exterity AvediaStream encoder into an MPEG video stream. Exterity AvediaPlayer Receivers, mounted with the LCD screens around the terminal, receive the signage stream simply as an additional available channel.

**Results**

Essential departures and arrivals signage boards were optimized and the commercial opportunities for shops, restaurants and bars within the airport improved, as they were able to promote themselves by offering commercial TV, scheduled play TV channels and promotional messages. The most significant benefit of the system is its flexibility with HD being the standard for broadcast today, it is important that terminals and transportation hubs can easily upgrade from SD to HD Encoders and Receivers, and this is what Exterity offers.
Product Spotlight

**AvediaServer**

**Powerful multi-service platform**

**Sophisticated content storage, handling and playback**

- Globally deployed leading IPTV environment
- Powerful multi-service platform
- Highly customizable end to end solution
- Sophisticated content storage, handling and playback
- Unrivalled IPTV system monitoring and support
Hospitality & Leisure
Increase guest loyalty, satisfaction and resort revenue
Exterity can supply an unlimited number of high definition channels with picture quality equal or better than the home experience to any number of guest rooms or hotel screens. The hotel network is used to deliver all the expected guest services as standard, and, with customizable interface options across the full range of Exterity products, it has never been easier to create bespoke services.

In room guest entertainment options are enhanced; revenue generating on screen promotions can be tailored to location or date, and Exterity systems are fully interoperable with hotel management systems to deliver interactive services such as reservations, booking tickets or guest billing via TV screen or network access portals.

- Deliver free to air, pay TV and premium sports and movie content to guest rooms and commercial screens in public areas
- Legally distribute content from other video sources such as DVD, BluRay players or video cameras
- Promote resort facilities with live video and on-screen apps; provide orientation and local attraction videos to guest room TVs
- Increase revenues with a wide selection of on-demand programming delivered to guests via a branded user interface
- Time shift news and sports of interest to foreign guests for access at a convenient time
- Supply guest information and announcements of scheduled events and amenities in reception and public areas by integration with digital signage platforms
- Integrate with Hotel Property Management System (PMS) so guests can view account information and checkout directly from their in room TV

Improve visitor experiences, increase guest loyalty and satisfaction and promote revenue generating resort services. **Deliver a luxury multimedia experience now, not in the future.**

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### Broadcast Capture

**AvediaStream TVgateway**

Stream free to air & encrypted content to guest rooms & public spaces.

---

### HD Encoding

**AvediaStream Encoder**

Securely deliver movies on-demand at up to 1080p. Create local hotel channels from content libraries & archives.

---

### IPTV System Control

**AvediaServer**

In-room & commercial entertainment on-demand asset library management & PMS integration for in-room bill & messaging.

---

### End Point Management

**AvediaPlayer Receiver**

 Receivers in guest rooms for secure, discreet, multi-language end point support.

---
When planning the resort refurbishment, it became obvious that a traditional coaxial TV distribution system could not support the hotel's determination to provide a 21st-century multimedia experience to guests. Such systems suffer signal degradation from long cable runs, which cause ghosting and picture breakup. Given the ubiquity of home DVD players and their high-quality pictures, this would be totally out of tune with guest expectations of a luxury resort.

The Exterity solution uses the hotel's newly installed IP network to stream terrestrial and satellite channels, as well as recorded video and audio content, to televisions and computers connected to the hotel network. All channels are captured and supplied to the network via Exterity TVgateways and Encoders. Exterity IPTV Receivers in each room connect TVs to the network and are powered from the network cable instead of the main, which simplified installation and reduces power costs. The entire system is integrated to the hotel's guest entertainment supplier who confidently supplies the latest movie and TV content safe in the knowledge that the IPTV system is secure and tamper-proof.

Guests can access a variety of channels and entertainment from the comfort of their own suite. They can choose between watching the news, the latest movies or listen to a variety of music channels available 24 hours a day at the touch of a button, and added to their accommodation bill hassle free – all enhancing their resort experience. The system is future-proof and scalable virtually without limit.

"We wanted a solution that would give our guests a futuristic multimedia experience. Exterity network IPTV has achieved this, and is completely in tune with the hotel's innovative look and feel."

Colin Farquharson, Group Property Management, Hilwood Resorts & Hotels
Product Spotlight

AvediaStream Encoder e3635 in an AvediaStream Chassis c1103

H.264 encoding, HDMI source compatible

AvediaStream Encoders create a single MPEG channel from the output of various video devices.
College & Campus
Build accessible video libraries of teaching materials
With Exterity, video based study materials are available wherever there is a network connection. Content can be displayed using classroom and student computers, standard TVs or any network connected display device. Back catalogues of thousands of hours of educational programming can be repurposed for delivery over IP as rolling channels, Video on Demand or a 24/7 accessible video library. Faculty members can access scheduled and recorded programming from all over the world or create subject specific streams of content interspersed with student announcements and messages. Existing IP networks in student accommodation can be leveraged to deliver not only internet series, but also TV and video via a PC viewing client, or standard TV using an Exterity set-top box.

- Give teachers and students instant access to course and study materials
- Continuously record important channels to make sure content is available for teachers; package entire programs or excerpts for course and study use
- Provide information, news, entertainment, radio and foreign language TV around campus
- Match TV channels to students’ interests and educational needs in student accommodation
- Preserve Internet bandwidth by delivering channels from a central point on your network, rather than as multiple streams across your Internet gateway

Teach, learn, inform, and entertain

Create and customize a video library of teaching and resource materials
University College London makes the grade with Exterity networked video over IP

Founded in 1826, UCL is London’s leading multidisciplinary university, with 8,000 staff and 22,000 students. Over 140 nationalities are represented among UCL students with overseas students making up nearly a third of the student body. Based in the heart of London, UCL is ranked seventh in the world.

**Challenge**

UCL required a means of providing TV and video to its language departments in order to enhance the learning experience for its students. Educational videos and TV from around the world streamed direct to students would form an essential resource for linguistic and cultural learning within the departments.

UCL is spread across multiple sites in London, and the language departments occupy five separate buildings, the University had previously been unable to install a TV system to provide this valuable resource, and had been searching for a scalable, centrally controlled TV and video distribution solution that would meet their requirements.

**Solution**

Having heard other Universities recommend IPTV systems from Exterity at events and conferences, UCL investigated the technology and found that IPTV was ideally suited to the project. The Exterity solution uses satellite TVgateways to capture broadcast from international multiplexes, and Avedia software clients and Receivers deliver channels to multiple end points around five sites.

**Result**

Students learning any of the languages on offer at UCL can access the IPTV system from any departmental PC and view a global archive of recorded material, without the inconvenience of having to locate and retrieve video tapes or DVDs.

“Students benefit from watching live TV direct from foreign countries as they can see the language they are studying being used naturally, and learn about that country’s culture, adding an extra dimension to the learning experience. UCL prides itself on being one of the most innovative learning centers in the world, so it was vital to enhance the departments with the innovative technology that reflects this.”

Sibylle Nalezinski, IT & Multimedia Support Officer, UCL.

TVgateways capture international channels  
Avedia Content Clients to 60+ PC’s  
AvediaPlayer Receivers to TV screens
Product Spotlight

AvediaPlayer r9200, r9210 and r9220
Discreet, robust and reliable HD ready set-top boxes
Power over Ethernet for smaller carbon footprint
Health & Residential Care
Enhance patient, visitor and staff information and entertainment experiences
Exterity systems stream high definition video assets, TV and radio broadcasts and digital signage channels, direct to patient bedheads over an existing IP network also used to deliver telephony, internet access or hospital radio. In residential facilities, Exterity Artio Portal enables the creation of bespoke services to give patients interactive access to facility information and staff the ability to access training and development materials from a central source.

- Deliver live TV and on-demand viewing to patient rooms and common areas
- Supply patient and visitor information and announcements in public areas through integration with digital signage
- Give patients the ability to order additional services (such as personalized menus, therapeutic massage) directly from their in-room TV
- Record and archive medical procedures for training and reference
- Time-shift news and TV of interest to overseas patients for them to access at their convenience

**Exterity IPTV integrates with a wide range of healthcare and information systems to give medical organizations a future-proof way to deliver an enhanced patient experience and improve return on network investment.**

<table>
<thead>
<tr>
<th>Content Capture</th>
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<tbody>
<tr>
<td><strong>AvediaStream TVgateway</strong></td>
</tr>
<tr>
<td>Capture live TV and stream to patient bedside for entertainment &amp; news.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>HD Streaming</th>
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<tbody>
<tr>
<td><strong>AvediaStream Encoder</strong></td>
</tr>
<tr>
<td>Create hospital TV channels of local content &amp; service information. Supplement staff development with training videos.</td>
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</tbody>
</table>

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<tr>
<th>Asset Management</th>
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<tbody>
<tr>
<td><strong>AvediaServer</strong></td>
</tr>
<tr>
<td>Manage the full IPTV system centrally including VoD, patient &amp; visitor orientation screens &amp; staff breakout areas.</td>
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</tbody>
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<tr>
<th>Unique End Point Delivery</th>
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<tbody>
<tr>
<td><strong>AvediaPlayer Receiver</strong></td>
</tr>
<tr>
<td>Physically secure STB units for live TV in public spaces &amp; patient rooms. Integration with emergency management protocols.</td>
</tr>
</tbody>
</table>

**Leading IPTV**
Leading women’s hospital improves IPTV experience, helping patients and visitors feel better connected

The Liverpool Women’s NHS Foundation Trust is the culmination of more than two centuries of dedication to women’s health, and the health of their babies. From its beginnings in the 18th century, it has grown to become the largest women’s hospital of its kind in Europe offering the highest standards of healthcare in maternity services.

“Exterity helped us deliver the government’s requirements for deploying entertainment systems to make patients comfortable, to make them feel connected and enable them to communicate more effectively with caregivers and loved ones.”

Dr. Zafar Chudry, CIO, Liverpool and Alder Hay Trusts

Challenge
The hospital required major investment in TV and video services to improve the patient experience in accordance with a government mandate on acceptable patient charters. Due to the physical restraints of the existing cabling and the building layout itself, selecting an enterprise video over IP solution seemed the obvious choice. The Trust also wanted a solution that could scale as they considered future possibilities for staff communication and development.

Solution
The Exterity system leverages the hospital’s high speed LAN on top of which sits Exterity head-end equipment capturing and streaming the 25+ broadcast channels to individual patient bedside screens and public areas. Exterity high-stream encoders inject signals from a Digital Signage player to show important announcements and hospital information. In the waiting rooms, 40-inch monitors display live and rolling news with subtitles provisioned from Exterity Receivers.

Result
Picture quality at end points now match viewer expectation to watch video of the same broadcast quality they would experience at home. A patient survey revealed that 75% rated the choice of TV, Video and radio as ‘excellent’ and easy to use. The Trust has been impressed with patient willingness to pay for bedside TV services, and consider the IPTV system a success not only in terms of patient experience but also for re-couping the system investment cost.
Exterity Network Video Ecosystem

AvediaStream TVgateways
- Transfer live TV direct from broadcast sources to enterprise networks
- Present channels as encoded by the broadcaster
- Descramble decrypted channels using standard CAMs

AvediaStream Encoders (MPEG-2/ H.264)
- Convert video input to high quality streams across range of resolutions and bandwidths
- Integrates broadcast TV with other video sources

AvediaServer IPTV Application Server
- Artio Portal
- System management
- Artio Desktop player delivery
- Asset management
- Scaleable VoD
- Scheduled content playout
- Recording
- APIs for customisation and third party integration
- Artio Multiview

AvediaStream IPTV Head-End

AvediaPlayer Receivers
- Integration to Artio Portal
- Designed for enterprise environment
- SD/HD content delivery
- Control through network, serial and web interfaces
- Support for room control systems
- Browser API integration to create custom applications
- Customisable interface and language

PC/MAC Clients

IPTV Content Clients
- Centrally managed client delivery to enterprise desktops
- Integrated EPG, VoD and recording services
- Modules available for integration with PC based systems such as digital signage
Content Protection & Signage Solutions
Protect Content Investment with Secure IP Delivery of Premium TV & VoD

Content owners, broadcasters, media operators and businesses deploying IPTV services need to incorporate the most advantageous options available to secure premium content over an enterprise IPTV system. Access to valuable content needs to be controlled by the IPTV system provider to secure revenue from monetize content and protect the material from illegal copying and distribution.

Exterity meets the demand for secure delivery of valuable content with the addition of support for High bandwidth Digital Content Protection (HDCP) v2, to sit alongside more established SecureMedia encryption and the interoperability of Exterity TVgateways with industry leading Conditional Access Systems (CAS).

HDCPv2

Exterity is the premier manufacturer of enterprise video over IP technologies to meet exacting digital content protection protocols by embedding HDCPv2 into Avedia head end and Receiver clients.

As the only content protection technology to secure the complete video path across an IP network, from HDCP video source to HDCP end point, any business wishing to show Blu-ray or other HDCP protected content can confidently do so, safe in the knowledge that their Exterity system is truly secure and compliant with HDCP.

Conditional Access Encryption

Exterity TVgateways descramble encrypted content using standard Conditional Access Modules (CAMs). With inbuilt dual tuners, TVgateways can securely distribute content from two satellite sources simultaneously and stream it across an IP network. Exterity TVgateways support CAMs from the leading providers of Conditional Access technologies such as Irdeto, NDS, Viaccess and Nagra.

SecureMedia

ARRIS SecureMedia Encryptonite ONE solution provides digital rights management (DRM) protection to meet security requirements of leading broadcasters. More and more Broadcasters need to protect content investment and potential revenue streams by verifying exactly what content businesses have access to. The integration of SecureMedia ensures live premium TV and video on demand content is restricted to only authorized Exterity Receivers.
Digital Signage

Relevant across many vertical markets, Digital Signage can be a compelling influencer of customers, prospects and employees at the point of decision by displaying relevant, informative, persuasive and visually engaging digital content.

Exterity Digital Signage solutions enable network-wide delivery of multi-media content. Scheduling, customization and management is provided through the powerful AvediaServer and end-point control is provisioned through Exterity AvediaPlayer Receivers.

Extending Digital Signage Capability through Integration

Exterity has added a leading Digital Media Bridge (DMB) to an Exterity solution to create a full HD quality signage option. The DMB Windows based player, Screen Builder, application enables users to create and publish sets of digital signage and digital menu board screens to individual and groups of combined Exterity Receiver end points.

Solution features include:

Exterity Receivers can be managed, monitored and controlled centrally from an Exterity AvediaServer as well as directly through their own web interface. Digital Signage is controlled using the Screen Builder application.

Build and schedule looping playlists, rich video on demand interactive screens, information updates or live TV on individual or groups of end points, specified via audience or location. Full interoperability with Exterity AvediaStream head end provides a complete video and signage over IP solution.

Exterity digital combines the power and flexibility of the AvediaPlayer Receiver with leading Media Player software to create a solution delivering superior functionality, reliability and life expectancy than more traditional PC based Digital Signage alternatives.
Artio

AvediaServer now includes new enterprise middleware to manage end point presentation and interface experiences. Exterity customers use Artio to customize the design and brand of multiple portals and channel viewing options to meet their own unique requirements.

**Artio Portal**

Artio facilitates the creation and management of customized TV, VoD, radio and interactive pages - tailored for individuals or groups of viewers across any screen or device - providing the flexibility for user engagement to go far beyond what was previously possible in the enterprise IPTV space.

**Artio Desktop**

Artio Desktop is a media player that instantly gives PC and MAC access to all TV and video content by simply clicking a link. Artio Desktop supports live TV, Video on Demand and provides a comprehensive EPG.

- Supports multi-language, subtitles/closed captions and teletext
- Centrally managed and deployed, easy to use and integrate with Active Directory and Groups to control access to content and services
- Provisioned, configured and managed from AvediaServer IPTV platform
- Flexible and scalable, additional end points don’t degrade picture quality
- Securely adds premium broadcast channels through integration with SecureMedia encryption

**Artio Multiview**

With Artio Multiview multiple video and data streams can be watched at once letting IPTV system administrators see the whole content picture on one screen.
AvediaCare

Protect your IPTV system investment

• Maximize system performance
• Extend product life
• Manufacturer supported warranty

Exterity offers a choice of service and product support for our partners to promote as part of their Service Level Agreements (SLAs) with their customers

It’s called AvediaCare

Protecting an Exterity IPTV system with AvediaCare ensures the system continues to be maintained and enhanced over its lifetime

Differing levels of AvediaCare cover allows customers to take advantage of comprehensive access to the AvediaCare Support Team, software updates and firmware upgrades via Exterity partners.

Enhanced cover with AvediaCare Plus provides the added confidence of hassle free unit replacement, minimizing potential IPTV system disruption should any individual product experience failure.

Developed around customer needs, AvediaCare from Exterity delivers manufacturer backed support so Exterity partners can confidently meet agreed SLAs.