

# The changing face of broadcasting

How the industry is responding to demand for new services

October 2010

# Contents

	Page
<b>Executive summary</b>	<b>3</b>
<b>Research methodology</b>	<b>3</b>
<b>The reality of managing content in broadcasting today</b>	<b>4</b>
<b>A long way to go</b>	<b>5</b>
<b>New realities require new approaches</b>	<b>6</b>
<b>Changing legacy mindsets</b>	<b>7</b>
<b>Integrating network infrastructures</b>	<b>8</b>
<b>Responding to digitisation of workflows</b>	<b>9</b>
<b>Conclusion</b>	<b>10</b>
<b>About Colt</b>	<b>10</b>
<b>Colt's principal European offices</b>	<b>11</b>

## Executive summary

The broadcasting industry is going through a number of disruptive transformations to meet customer expectations for an enriched viewer experience through new formats such as HD and 3D, and new channels such as the web and mobile devices.

The challenge for the industry is to adapt business models and to reengineer processes and workflows to cater for the distribution of content in multiple formats through multiple channels – without multiplying costs.

Infiniti Research surveyed 100 technology decision-makers and influencers in the industry to find out how broadcasters are responding to these challenges.

The research found that many still have a lot to do and that progress is uneven. Clearly legacy mindsets need to shift in the industry to cope with new realities. The traditional reliance on in-house expertise specific to broadcasting may no longer be the most appropriate way to deliver value when building content delivery platforms that can cater for multiple formats and channels reliably, scalably and cost-effectively. But although the majority are looking to integrate their broadcast and non-broadcast networking infrastructures, a strong minority don't seem willing to break down the technology borders between core broadcasting services and general business IT services.

Based on the findings of the research and our own experience of the broadcasting industry, we make three observations:

- The pace of migration to new formats and workflows will increase dramatically in the next few years, driven by the need to realise the potential of content monetisation through ubiquitous content delivery.
- The industry will overcome resistance to breaking down traditional broadcasting and IT silos by turning to objective outsiders with the right combination of IT and media expertise.
- As broadcasters question whether they need to rely on in-house resources for every aspect of their operations, they'll begin to explore managed services in areas such as storage, probably starting with archive, in order to free up resources to focus on their core content creation, distribution and management business.

## Research methodology

As part of the research for this paper, Infiniti Research, a leader in the provision of market research and intelligence services, conducted a survey of business, IT and purchasing decision-makers from 100 broadcast media companies across sixteen countries in Europe (Austria, Belgium, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Lithuania,

Netherlands, Portugal, Serbia, Spain, Switzerland and the United Kingdom). The companies surveyed are categorised as major enterprise based on a definition of 1,000+ employees.

The survey took place between April and June 2010 and was conducted via telephone interviews.

# The reality of managing content in broadcasting today

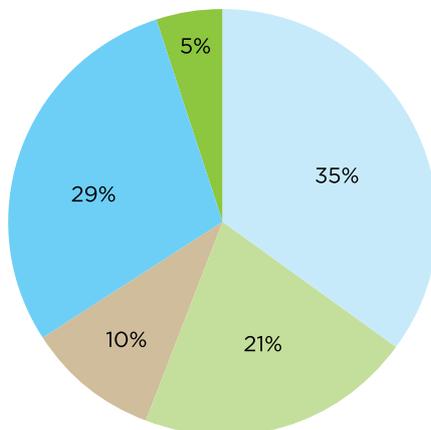
The face of broadcasting is changing again.<sup>1</sup>

It's a transformation — or a number of parallel transformations — as significant as past migrations from black-and-white to colour or from legacy distribution networks to digital terrestrial television, satellite and triple play.

Today it's the arrival of high-definition services, the possibility of 3D taking off and new channels to market through the web and mobile devices. It's the need to manage content in multiple formats simultaneously and distribute it via multiple channels in parallel.

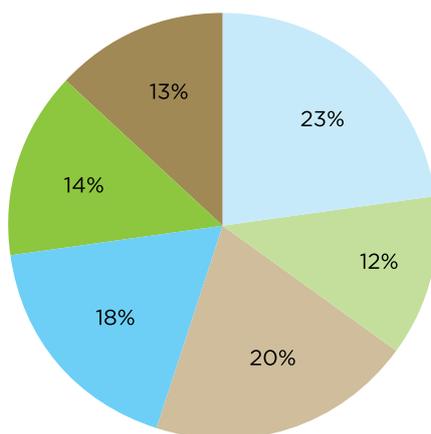
Whether producing, ingesting, annotating, cataloguing, storing, retrieving, distributing or archiving content, the industry's digital asset management and digital rights management challenges have become more complex. Key broadcasting processes and technologies have to be reengineered to replace linear, analogue, 'offline' workflows with non-linear, digital, file-based, networked production and distribution.

Even as the landscape lurches beneath the broadcasting industry, business must continue. Nobody can just throw away their old infrastructures, applications, processes or models of working and start anew. The challenge is to manage the transformations under way and respond to user demand for enriched viewer experiences and service diversity — without multiplying costs.



**Figure 1:** Proportion of content sourced through various formats

- Physical media
- Satellite networks
- Terrestrial wireless networks
- Data networks
- Others



**Figure 2:** Proportion of existing content stored offline

- No offline data storage
- 1%-19%
- 20%-49%
- 50%-79%
- 80%-99%
- All data stored offline

<sup>1</sup> In this paper, we use the words 'broadcasting', 'broadcasters' and other forms to refer inclusively to all types of company in the industry, including production and post-production, traditional and new-media broadcasters.

## A long way to go

Infiniti Research surveyed 100 technology decision-makers and influencers in the broadcasting industry to find out how the industry is progressing with the adjustments underway and what challenges it's facing in the process.

Given the scope and scale of the changes facing the industry, it should come as no surprise that many companies still have some way to go in transforming their operations to cater for new realities.

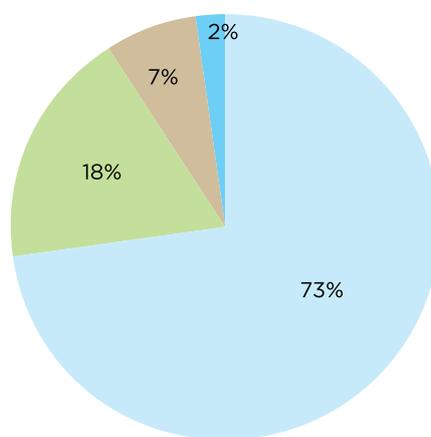
### Still offline

Broadcasting operations are still significantly 'offline', with processes and cultures still geared in many ways to the industry's past; not its future of file-based, non-linear digitised workflows. We see this clearly in two results from the research:

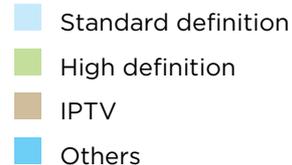
- Those surveyed still rely heavily on physical media such as tapes and CDs when sourcing data, with 35 per cent of their content sourced in physical form (see Figure 1).
- Much of the respondents' data storage is not networked: 45 per cent of respondents store more than half of their data offline; only 23 per cent store all of their data online (see Figure 2).

### Still in SD

Then there's the fact that, for all the talk of HD and IPTV, it's still just a fraction of what the industry does: 73 per cent of the video content carried over our respondents' networks is in standard definition (see Figure 3). And we know that much of the HD content currently being delivered isn't actually recorded in HD, but up-converted from SD feeds.



**Figure 3:** Proportion of video content carried over the network in various formats



**Note:** n=95; 5 respondents do not carry any video content

### Colt observation: things are about to take off

The research shows clearly that moving to new formats and digitising the broadcast workflow is not just a matter of flicking a switch. This is a business re-engineering process that touches every element of media creation and distribution, from the camera to the end-user consumption device.

But we believe that the pace of change will increase dramatically in the next few years, driven by the need to realise the potential of content monetisation through ubiquitous content delivery while ensuring that sufficient time is allocated to the significant business re-engineering required to realise a fully digital workflow. Key legacy equipment used within the industry will be reaching its end of life in the next two-to-three years, creating a compelling event to drive this transformation.

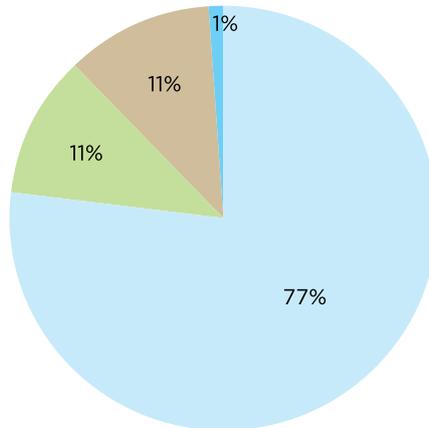
# New realities require new approaches

The industry's traditional response to transformation in its markets is to invest in new technologies, processes and skills and to own and manage them in house. The survey results clearly reflect that broadcasters are used to handling their technology needs themselves. For example:

- 77 per cent of the respondents are handling content management in-house with their own, customised solutions (see Figure 4).
- 73 per cent are handling all of their data storage requirements in-house (see Figure 5).

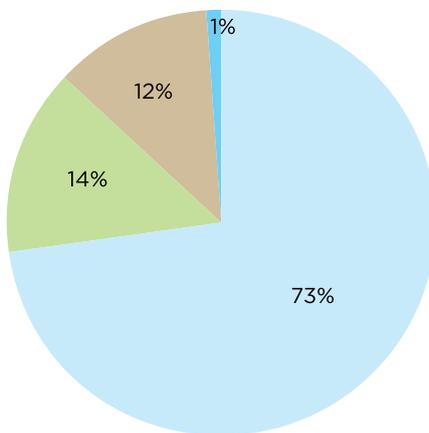
Not too long ago, this made sense: broadcasting's technology needs were very specific to its core business, and all the support functions of that business were beyond the sphere of technology. But that's all changed.

Today there are complex overlaps and interactions between the uses of technology that are 'broadcast-specific' and those that aren't. For example, the specialised devices and interfaces used in legacy transmission systems require expertise that only broadcasters have; but the broadcast of video over the internet is now a common occurrence everywhere and uses standard technologies.



**Figure 4:** Who do you turn to for your data/content management requirements?

- Own content management
- Use internal as well as 3rd party content management
- Use a 3rd party for content management
- No data/content management requirements



**Figure 5:** Who do you turn to for your data/content storage requirements?

- Own data centres
- Use internal as well as 3rd party content management
- Use a 3rd party data centre
- No data/content storage

## Colt observation: how to get started

Every successful business project begins by understanding existing business processes, systems and costs; and then analysing what's working, what isn't, what can be improved and what to do about it. For broadcasters moving to a digital workflow, the first step should be a comprehensive business process and technology audit to identify and prioritise current and future needs.

If you're looking to break down traditional silos, it's necessary to cut across the broadcasting and IT/communication functions and understand where non-broadcast-specific technologies such as IP or Ethernet can and can't work. But it's difficult for any organisation to take a completely objective view of their own business. The trend is therefore for broadcasters to turn to external consultants with the requisite IT and media expertise to get their transformation going in the right direction.

# Changing legacy mindsets

In this new environment, broadcasting companies are asking themselves whether the traditional 'do it yourself' approach is the best way to ramp up their contribution and distribution capabilities to handle digitised content, manage the associated metadata and digital rights, increase quality with HD and enrich customer experiences through new media and new devices. Is it the best way to manage the year-on-year growth in data volumes that lie ahead, or the migration to digitised workflows with their corresponding greater demands on technology resources and expertise?

We've already seen that broadcasters have a lot to do to complete these transformations. And we know that resources are limited: like every other industry, broadcasting businesses

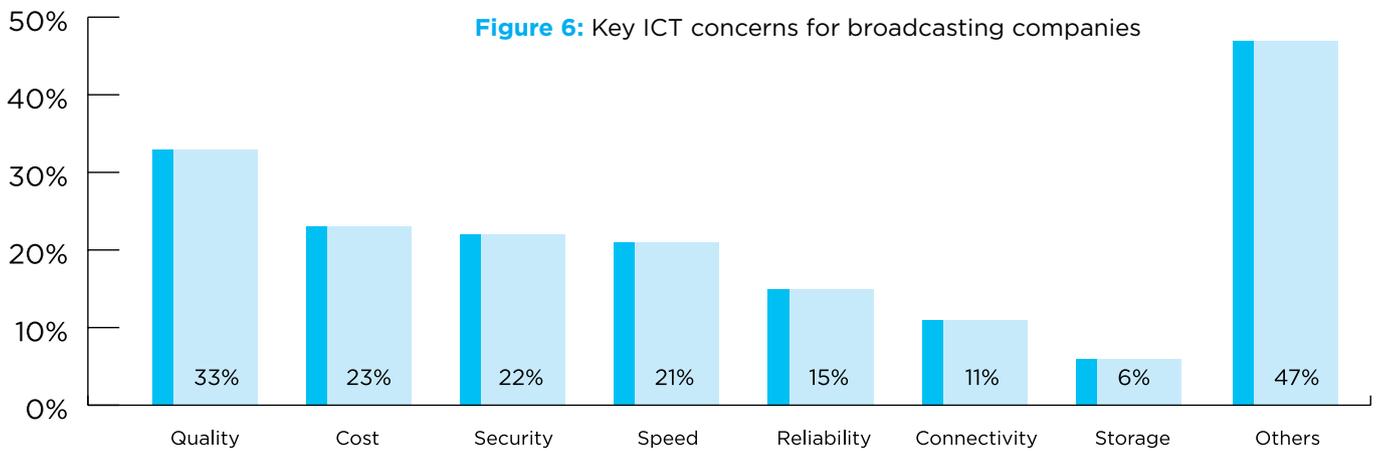
are looking to their in-house technology teams to deliver better value; to drive cost out of the business while simultaneously enabling them to deliver a better service to customers and be more responsive to changing customer needs.

## Key issues and questions

So broadcasting technology leaders have a tough balancing act to perfect. When the survey respondents were asked what issues, if fixed, would help their CIO (who may have been the person being surveyed) to sleep better at night, the top five answers were quality, cost, security, speed and reliability. Although quality did stand out, clearly there's not much room for compromise anywhere: they're mostly of essentially equal importance (see Figure 6).

Faced with high business expectations and limited resources, broadcasting technology decision-makers have no choice but to explore new ways to be efficient and flexible. Small wonder that they're grappling with questions such as:

- How far can we integrate the IT needs of our core business with those of the rest of the business? Should we be breaking down the silos of responsibility held by broadcast services and other IT services?
- How much of what we're used to doing ourselves should we continue to handle in house? Can we partner with a provider of IT solutions to leverage their expertise and scale for business advantage?

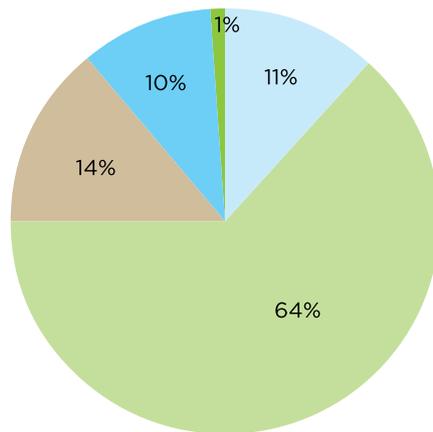


# Integrating network infrastructures

When the survey respondents were asked about their plans, if any, for integrating their contribution, distribution and non-broadcast IT needs in the near to medium term, fully 72 per cent of the respondents are either planning to integrate their networks, considering it or have already done so.

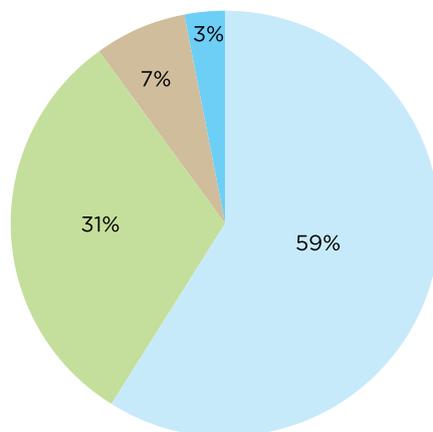
Whether sourcing or distributing content, a clear majority is apparently confident that today's IP or Ethernet technologies can offer a multi-service platform with the necessary bandwidth scalability; low latency and jitter; control; security; reliability; support for multiple formats and codecs; uni- and bi-directional broadcasting; and all their other core broadcast service needs. Not to mention the cost advantage of replacing multiple networking platforms with one multi-service platform when looking to deliver HD-quality content in multiple formats to an online, digitised world.

Nevertheless, more than a quarter (28 per cent) of the respondents replied that they are consciously keeping their content, distribution and IT on separate networks. This is a strong minority in favour of keeping their core business separate from other IT platforms; and a surprise, given the key issues identified in Figure 6. We certainly expect broadcasters to look closely at the quality, cost, security, speed and reliability of any potential converged network solution; and it's the job of potential network solution providers to address their stringent requirements on these criteria. But clearly these requirements can be, and have been, satisfactorily addressed for the majority of the industry — at least in relation to their networks.



**Figure 7:** Current storage capacity requirements

- Less than 1TB
- 1TB-100TB
- 100TB-1PB
- 1PB-100PB
- More than 100PB



**Figure 8:** Annual expected increase in data capacity requirements in the next few years

- Less than 20%
- 20%-50%
- 50%-100%
- More than 100%

**Note:** n= 74; 26% of respondents don't expect a change in data requirements in the next few years

# Responding to digitisation of workflows

As the industry gears up with integrated networking infrastructures to support the move to HD, IPTV and whatever comes next, there's the parallel problem of transforming core business processes and systems to cope with the migration of linear, offline workflows based on tapes to non-linear, networked flows of digital files.

Content management will always be the core business of broadcasting, requiring specialised systems for the foreseeable future to cope with the digital asset management challenges specific to the industry. But in addition to putting significant new demands on asset management, the digitisation and networking of workflows has major knock-on effects for storage.

## Reconsidering storage

Although your content is currently stored predominantly on tapes and archived in warehouses, the digitised future will be one of storage in IT data centres. Even before this transformation, broadcasters handle very large volumes of data: predominantly in the tens of terabytes and growing by up to 50 per cent per year, according to the survey results (see Figures 7 and 8).

Given these volumes, broadcasters should be asking themselves whether their business is best served if they're diverting resources away from their core content management business to worry about the day-to-day management of their storage infrastructure.

How much budget and time will be devoted to keeping storage up and running, never mind maximising performance, being able to scale quickly to cope with growth, and being confident that business continuity and disaster recovery are taken care of?

After all, storage of exploding data volumes is a challenge faced by just about every organisation in the world today, even if broadcasting faces it in the extreme. There are many robust solutions to this challenge. Instead of handling their storage themselves, broadcasters could be leveraging the expertise and economies of scale of storage experts already offering sophisticated, cost-effective managed solutions.

### Colt observation:

#### start with archive to explore IT best practices

We believe that broadcasters can benefit by exploring new IT best practices if they want to build a flexible platform able to ingest, repurpose and deliver content in a digitised world. If technological, cultural or organisational factors stand in the way of doing so, it's possible to find ways to 'start small' and progress in stages.

For example, archive is a relatively non-mission-critical area of storage that can clearly benefit significantly from the ability to scale storage quickly and cost-effectively through a managed storage service. Starting with archive requirements is an ideal way for broadcasters to discover how IT best practices developed outside the industry can help them cope more effectively with new business realities.

## Conclusion

As the broadcasting industry goes through a number of disruptive transformations, the challenge is to adapt business models and reengineer processes and workflows to cater for the distribution of content in multiple formats through multiple channels – without multiplying costs.

In responding to these challenges, the industry still has a lot to do and progress is uneven. Legacy mindsets need to shift to cope with new realities. The traditional reliance on in-house expertise specific to broadcasting may no longer be the most appropriate

way to deliver value when building content delivery platforms that can cater for multiple formats and channels reliably, scalably and cost-effectively.

Based on research findings and our own experience of the broadcasting industry, we believe that:

- The pace of migration to new formats and workflows will increase dramatically in the next few years, driven by the need to realise the potential of content monetisation through ubiquitous content delivery.

- The industry will overcome resistance to breaking down traditional broadcasting and IT silos by turning to objective outsiders with the right combination of IT and media expertise.
- As broadcasters question whether they need to rely on in-house resources for every aspect of their operations, they'll begin to explore managed services in areas such as storage, probably starting with archive, in order to free up resources to focus on their core content creation, distribution and management business.

## About Colt

Colt is an established leader across Europe in the provision of business voice, data and managed IT solutions. We currently provide service to more than 50,000 organisations, including hundreds of media organisations across Europe.

In the broadcasting sector we're helping customers such as MTV, TF1, Canal+, France 24, Globelynx and the Berlinale festival, and to provide premium services reliably, cost-effectively and securely. We provide:

- Unparalleled consultancy expertise through a team of media sector specialists
- Integrated networking and IT solutions, including:
  - Network solutions in multiple transmission media: fibre, layer-2 Ethernet and SDH for video traffic across Europe
  - Sophisticated managed storage in partnership with EMC
  - Managed web services to optimise your delivery of new media services
- Low-latency, low-jitter connectivity across Europe
- Leading expertise in the support of live broadcast events

Our solutions are delivered using a wholly-owned 25,000km network that includes metropolitan area networks in 34 major European cities with direct fibre connections into 17,000 buildings and 19 Colt data centres.

**Austria**

Colt Technology Services GmbH  
Kärntner Ring 10-12  
A-1010 Vienna  
Austria  
+43 (0)1 20 500 0  
www.colt.net/at

**Belgium**

Colt Technology Services NV  
Culliganlaan 2H  
1831 Diegem  
Belgium  
+32 (0)2 790 16 16  
www.colt.net/be

**Denmark**

Colt Technology Services A/S  
Borgmester Christiansens Gade 55  
2450 Copenhagen SV  
Denmark  
+45 (0)70 21 23 30  
www.colt.net/dk

**France**

Colt Technology Services  
23-27 rue Pierre Valette  
92247 Malakoff Cedex  
France  
+33 (0)1 70 99 55 00  
www.colt.net/fr

**Germany**

Colt Technology Services GmbH  
Herriotstraße 4  
60528 Frankfurt  
Germany  
+49 (0)69 56606 0  
www.colt.net/de

**Ireland**

Colt Technology Services Limited  
15-16 Docklands Innovation Park  
East Wall Road  
Dublin 3  
Ireland  
+353 (0)1 436 5900  
www.colt.net/ie

**Italy**

Colt Technology Services S.p.A  
Viale E. Jenner 56  
20159 Milano  
Italy  
+39 (0)2 30333 1  
www.colt.net/it

**Netherlands**

Colt Technology Services B.V.  
Van der Madeweg 12-14a  
Postbus 94014  
1090 GA  
Amsterdam  
Netherlands  
+31 (0)20 888 2020  
www.colt.net/nl

**Portugal**

Colt Technology Services,  
Unipessoal Lda  
Estrada da Outurela,  
118 - Parque Holanda  
Edifício B1  
2790-114 Carnaxide  
Lisbon  
Portugal  
+351 (0)21 120 00 00  
www.colt.net/pt

**Spain**

Colt Technology Services, S.A.U.  
C/ - Telémaco 5  
28027 Madrid  
Spain  
+34 (0)91 789 9000  
www.colt.net/es

**Sweden**

Colt Technology Services AB  
Box 3458  
Luntmakargatan 18  
SE - 103 69 Stockholm  
Sweden  
+46 (0)8 781 80 00  
www.colt.net/sv

**Switzerland**

Colt Technology Services GmbH  
Mürtschenstrasse 27  
CH-8048 Zürich  
Switzerland  
+41 (0)58 560 16 00  
www.colt.net/ch

**United Kingdom**

Colt Technology Services  
Beaufort House  
15 St. Botolph Street  
London EC3A 7QN  
United Kingdom  
+44 (0)20 7390 3900  
www.colt.net

**www.colt.net**

Colt is Europe's information delivery platform, enabling its customers to share, process and store their vital business information. Colt provides major organisations, midsize businesses and wholesale customers with a powerful resource that combines network and IT infrastructure with expertise in IT managed services, networking and communication solutions. Colt operates a 13-country, 25,000km network that includes metropolitan area networks in 34 major European cities with direct fibre connections into 16,000 buildings and 19 Colt data centres.

Colt Group S.A. is listed on the London Stock Exchange (COLT). Information about Colt and its services can be found at [www.colt.net](http://www.colt.net)

© 2010 Colt Technology Services Group Limited. The Colt name and logos are trade marks. All rights reserved.