The BBC Journalism Portal and the Future of Newsroom Production Tools

WHITE PAPER

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“We owe it to our audience to offer them the very best of what we do – not just what one journalist or team knows. There’s a massive opportunity cost in not ensuring that the best material we have is shared across the organization… The Portal gives all our journalists – and therefore all our audiences - access to the full range.”

Helen Boaden, Director of BBC News Group

“The Journalism Portal will increasingly become the place where the real-time BBC journalism is being conducted and then leveraged across production systems … something that really drives our journalism in ways that we’re only just beginning to realise...”

Peter Horrocks, Director of Global News

“What makes our journalism great? Yes, it’s about having the right facts and information. But it’s also about being fast and timely. So the more easily we are able to move around knowledge, information and nuggets of content to teams wherever they happen to be, the better our journalism will be. That’s what the Portal allows us to do.”

Mary Hockaday, Head of the BBC Newsroom

“If we design the system we need for today it won’t be the one we need for tomorrow – it has to be adaptable.”

Peter Coles, Technology Controller, BBC Journalism
The UK-Global community home page on the BBC Journalism Portal with a Libya discussion in full swing.
I. THE CHALLENGE

The Journalism Portal: a Journey Begins

“We are on a journey that takes us towards a world where we provide for the journalist the ability to share, collaborate, author and exploit the content that we have, and the ability to bring those capabilities together within a next generation newsroom tool set that enables them to be able to work effectively in an ever-changing multi-platform world.”

Peter Coles, Technology Controller, BBC Journalism

Newsroom production is changing fast – and changing forever. Journalists are multi-tasking in ways they have never done before, across more media than they have served before, using more sources than they have ever had before. Patterns of audience consumption are changing equally quickly.

Part of the BBC’s response to this rapidly changing environment is to create the Journalism Portal: a flexible and ‘living’ web-based system that can change as the needs of the organisation change. The Portal is a very important development for BBC journalism. It is already driving a degree of culture change through its open planning and collaboration tools: much is being learned as the system is developed. The features and capabilities of the Portal are set out later in this paper.

But it is one part of a much wider vision; the first step on a journey founded on close working between BBC News Group and BBC Technology. The BBC’s aspiration is for all the production tools a journalist needs for video, audio and web production to be integrated as lightweight web applications through the Portal. This would enable not just the mash-up of the information in the way it is presented to the journalist, but also the mash-up of the workflow in a way that can be iterated continually.

Production processes are becoming ever more story-centric; built around story communities. The ambition for the Portal is for it to become the platform where a journalist can plan and author content as well as aggregate the information and content around any given story. Then the journalist would choose where to publish that story, depending on their task – perhaps to a running order for a linear output or elsewhere.

More importantly, another journalist working on that same story could pick up those aggregations and that text and very simply, without having to re-enter or re-create any of the core material, then adapt it and apply it to the output to which they in turn are publishing.

This paper sets out the development and features of the Portal so far, its uses inside the BBC and the challenges in introducing it. It also looks at the future of newsroom production systems and the characteristics of the kinds of platforms that are likely to be needed for journalists of the future.

The Business Context

The BBC News Group is very diverse and very widely distributed. Besides headquarters in London, it has bureaux across the UK and around the world. It produces a vast array of output, in text, video and audio across multiple networks on a local, national and international level. It straddles different locations and timezones, many different languages and a host of different technical set-ups.

This size and scale can provide the organisation with huge advantages. But it can also create problems. As with many larger organisations, it can be hard to avoid a silo mentality. It has multiple systems and multiple pockets and places for storing information. So it can be difficult for people to discover that content unless a journalist knows where to look. “Discovery is dependent on one-to-one engagement rather than the world in which we live today – accessible, open and sharing. That’s the fundamental point of the Portal,” says Peter Coles.

Peter Horrocks, Director of BBC Global News, put it succinctly: “We don’t know what we know.” In other words, a piece of editorial or logistical information gleaned by one part of the organisation can take too long to be shared with other areas [indeed, it may only be shared by being broadcast].
There are two reasons: one is a culture of secrecy and internal competition – a culture the BBC has worked hard to erase in recent years. The other is that the existing technological systems don’t make it easy. “One of the problems we have is that existing systems almost enshrine a lack of sharing,” says Mariita Eager, Head of Change at BBC Global News. The existing production ‘architecture’ is also very distributed: every site has its own systems. Each local radio station, for example, will have its own Radioman system [audio edit + playout system in local radio] and, in effect, its own ENPS system [newsroom computer system] and its own servers. The distributed nature of its existing production architecture across many different sites makes it quite difficult to put those applications in a lightweight form through a Portal.

Multiple systems can create inefficiencies. Journalists can often be doing the same thing or working on the same story without knowing they are. Unnecessary work is probably being done because journalists are unaware of what is going on in other areas.

Editors complain that a ‘push culture’ has evolved where, for example, a piece of information is emailed to a distribution list, then forwarded to further lists. Before long the information has been ‘spammed’ to everybody and devalued.

Other challenges are emerging. News organisations have been heavily reliant on news agencies to supply them with accurate information. But the array of potential sources is now vast - and growing. So there is a growing need for systems that can go and analyse that material and bring meaning to it.

The BBC News Group is also facing big structural changes. Over the next two years, it will move much of its UK-based journalism functions into two custom-designed facilities in Central London [known as W1] and Salford. For the first time in the Corporation’s history the output teams from domestic news will sit alongside those from World Service.

These are challenges right now. Looking to the future, Peter Coles says the BBC must move towards a tool set that really supports multi-media production: “Look out to the world of IPTV and 2nd screen activity. What we currently think of as being on different platforms all begins to merge together as an audience experience. What you begin to realise is that we need to bring together our workflows much earlier in the production chain. Historically, we have separated out to platforms very early in the cycle. The systems we use have been structured that way.”

So what of the existing newsroom production systems? Simon Andrewes, Programme Director for the Journalism Portal, says: “The newsroom business has changed for ever. A lot of the solutions that have done us very well for many years are not wrong, but they need to approach news production in a different context. People are multi-tasking in a way they never were before, across more media than they were before. It isn’t going to work if we try to build big systems that try to do everyone’s job. Tools that join things up and help us leverage what we’ve got are what will be needed – light-touch tools based around people.”

So working together, BBC News Group and BBC Technology set out to design what it sees as a flexible and ‘living’ system – the Journalism Portal – that can change as it changes. Its aim is to build a system that will promote and facilitate sharing and collaboration, enhance planning and communications across organisational or geographical boundaries, increase efficiency and smarter allocation of resources, and improve the quality of its output. Because of its ability to deliver these things, it is hoped, it will also act as an enabler for the moves to W1 and Salford, in large part because of the way it brings people together.

II. THE PORTAL

Developing the Journalism Portal

As consumers, most of us are now familiar with the platforms and methodology of social media. Platforms like LinkedIn and Facebook build networks and communities. We have become used to the acute speed of Twitter, as well as the way it forms like-minded or specialist communities. Google and Bing are among the everyday tools we use for searching the web.
We use RSS and Twitter feeds to search for us in order to remain up-to-date. We are accustomed to downloading apps relevant to our specific needs. We read blogs to stay across the specialisms, niche areas or communities that most interest us. We interact with many of these platforms, sharing ideas and thoughts, or perhaps even asking questions. Taken together, these platforms – all on the internet - can give us speed, depth, networking and open communities; and they can facilitate the sharing of knowledge and resources.

In essence, BBC News has taken the methodology and notion behind all these social media platforms and tools and built a system on top of an a existing piece of collaboration software to create one portal for the journalism community within the BBC.

No long-term decision has been made on which software to use. The Portal is currently built on top of a Microsoft SharePoint web application platform designed to facilitate collaboration and the sharing of content and documents. It is similar to IBM Websphere’s portal, a major competitor for this sector. These kinds of system can handle the scale, range of sources and level of integration necessary for this kind of requirement. They address basic needs and then allow the development effort to be focused on adding industry–specific functionality rather than creating the entire collaboration platform from scratch.

Unlike most of its existing production systems, the Journalism Portal is accessed via a web browser: it is available anywhere there is an internet connection. Currently, in some BBC bureaux, technology can be very limited: systems used in the main centres are not available at all.

The portal is designed to be flexible and adaptable. It can be quickly modified and adapted to suit whatever needs are required. Bespoke areas and applications can be developed very quickly. The ‘feel’ of the portal is familiar: that of social media. As the Head of the BBC Newsroom, Mary Hockaday, noted, “All sorts of systems and practices are moving to web-based ways of working. So staff are used to and comfortable using these techniques – it’s now their habit of technology use.”

The Portal and its features

So how do senior editors at the BBC see the Portal? Mariita Eager sees it as: “the essential journalism tool for global news, because it joins up all our teams around the world into one community.” For Cath Hearne, Head of Regional and Local Programmes in the UK Midlands, it is, quite simply, “a tool for sharing content and information between journalists, quickly, openly and easily.” Mary Hockaday describes it as “the web-based destination for our teams to work. The primary and essential system for finding information, sharing information and communicating with others - wherever they may be.”

Story communities

“The biggest change for jobbing hacks will be - for those writers, reporters, producers whose job is working on a particular story – the search facility to surface everything we know and have about that story. That is potentially the most valuable element of the Portal. Parallel to that the ability to chat with others working on that story – wherever they are, whatever they’re doing, whichever guests they’re booking.”

Mary Hockaday, Head of the BBC Newsroom

Most news organizations with multiple outlets have communities – or teams - organized around specific programmes or output with a certain audience. The Portal allows journalists to combine that allegiance with the ability to enter a much broader ‘story community’.

The idea of editorial communities is at the heart of the portal. It allows groups of journalists to collaborate – in real time - around a common editorial agenda rather than an organisational or geographical structure. The system’s transparency allows journalists to see and share a lot of information on any given story.

A community may be large or small. It may only last a day on short-lived stories. Or for specialists – in science, environment or the arts, for example – the community can be permanently arranged around a niche subject. Thus a technology story from the Russian Service can be tagged in a way that someone in the UK business unit will see it. In the past this kind of collaboration would have only happened through emails or one-to-one phone calls.
The Africa Community page showing chat between journalists in Africa and London, alongside feeds and search-driven views of Africa-related content.

For example, instead of working in isolation, a journalist or programme interested in some aspects of Africa can be part of a far wider community. At the BBC that might contain English and five other languages, newsrooms in the UK and bureaux in Africa and output across online, radio and TV. The portal creates an instant chat room and community in which any user can add or seek information and see who else is logged on at any given time.

Obviously, journalists can move between communities. On certain stories - China buying resources in Africa, for example – journalists from the China community will want to enter the Africa community. The system is trying to promote and encourage openness and, in areas where the portal is being more heavily used, the results are positive. Delia Radu, Editorial Change Analyst at the World Service, said: “The portal is driving a change in the culture - people have started thinking about working on stories and the treatment of stories together. And we are reducing a huge number of parallel phone calls and emails.”

Barney Price, Assistant Editor, BBC World Service News, makes another point about story communities: “On a big story – you can assemble one smaller team to concentrate on one story rather than many teams across the organisation.”

CASE STUDY: BREAKING STORY : The Abuja bombing

Shortly after 11 o’clock on the morning of June 16th, rumours began to spread of a huge explosion in the Nigerian capital, Abuja. At Bush House in London, BBC Planning Editor Vera Kwakofi was quickly on to the story.

At 1107 she flashed a note on the Portal: “Bashir [from the BBC Hausa Service in Abuja] confirms that
they have heard a large blast in Abuja, around the police headquarters. They’re sending a reporter to find out what’s happened.”

This shared editorial and logistical information was instantly available to anyone in the Africa Community hub and anyone else interested in following the story.

At 1122, the Editor of the Hausa Service, Mansur Liman, used the portal to quote a government official as saying that the explosion had taken place at the headquarters of the police force close to the presidential villa. Shortly afterwards he posted: “Firemen are struggling to put down the flames that followed the explosion. An official said so far 30 cars have been destroyed due to the explosion. It is not certain yet what caused it.”

By 1200, Damian Zane, from Focus on Africa, had shared a variety of pictures across the whole community from phones and cameras by posting them on the portal.

The Hausa reporter flashes on the portal that an eyewitness has told him that he had heard two explosions and seen over 30 dead bodies and about 40 vehicles, including police cars, destroyed by the explosions.

Focus on Africa ask: “is that in English?” The reporter replies: “We have two eyewitness accounts… one in Hausa who quoted those figures - the other guy in English cannot quote any numbers but saw victims being evacuated.”

The reporter then goes on to explain where the audio can be found: “I have saved the audio of an eyewitness in FTP bushafme under the name ‘Abuja explosion witness’. Bashir Sa'ad Abdullahi the Abuja Bureau Editor interviewed the guy.”

And so the story continued, each flash, message, question and answer alerting everyone simultaneously to the latest editorial lines and crucial logistical information.

“Before the Portal this would have involved multiple phone calls and emails. Here everyone could see that conversation instantly. Commissioning was done for everyone in one place without any phones or emails. The Abuja office weren’t getting 20 calls. The bureau simply accessed the Portal online. Others outside the Africa community could go into the conversation in real time or after the fact.”

Mariita Eager
Planning

The Portal is well suited to planning functions and used extensively by planning teams. BBC planners are often scheduling a very complicated calendar of commissions from correspondents in the field.

Many stories are co-commissioned across a range of programmes and so need heavily co-ordinating. It is important that everyone knows who is talking to whom, the nature of the material likely to be gathered and that everyone knows the proposed transmission dates. The aim of the Portal is to instantly bring all this information together in one place – and available to everyone. Equally important is the management and sharing of information about more rapid coverage deployments.

It is a new way of working. Planners used to being protective of their grids and diaries struggled initially with the notion that anyone could enter ‘their’ diary. “People were amazed that everyone could add and everyone could delete,” says Marita Eager, “but people behaved very responsibly.”

The Global Diary showing commissioned features prepared for a range of outlets, including many multiplatform commissions.

Journalists have also been used to organizing their diaries in the newsroom computer system [the BBC uses ENPS]. But this tended to encourage a ‘silo approach’ because material was often hidden from view, available only to that team. The solution? “For planning, the only way to make it work was to stop using ENPS [for diaries],” says Barney Price, “so I turned off the ENPS and forced people across.”

Now, correspondents in the field can put material straight into diaries from location. So a correspondent can pitch the story to all the relevant outlets at the same time. Relevant entries from one diary can be recommended or automatically flagged in other diaries. This hugely simplifies the process that, hitherto, has involved a number of parallel conversations and emails.

The portal also allows planning diaries to have content associated with them. So in the global diary, for example, a story about the Middle East can have audio and script attached, in a way that can then be moved around the system.

Planners are now developing a system of rules around how to handle embargos and ‘scoops’, where relevant entries carry stipulations about timing and usage.
The Portal can create new communities and planning areas around any given events. For example, a new section, developed around a map, is being built for planning around the Olympic torch route. Planning for major stories, like the Olympics and the Royal Wedding, have had discreet sites built for them on the Portal.

**Idea and Content Exchange**

Different teams have developed their own bespoke areas and – with the help of the portal team – functionality. The ‘Content Exchange’ is a repository for shared building blocks where audio and video is posted and highlighted. It grew from video initially to graphics [which were still being sent by email] and now stills. The BBC is a multi-lingual organisation and the ‘Global Video Unit’ uses the portal to develop core video content that is then reversioned in a wide variety of languages.
EXAMPLE: LOCAL RADIO BREAKFAST SHOW PILOT

Sharon Simcock, Assistant Editor at BBC Radio Shropshire, was asked to take three months out to work on a project to try to help local radio breakfast show producers from across the UK work together more closely as a community. She used the Portal to establish a community that could share material in the widest sense but also form smaller groups around smaller shared interests [the Royal Wedding, for example]. She started small, with about 10 people. “People originally saw it as another thing to do. These were busy Breakfast producers,” says Simcock.

Local Content Lists
Share some daily Talking Points and Mid morning items. Select a tag to see Prospects from GNS and Milbank.

Now Talking Point
New Talking Point
New Mid morning Item

Within 3 months, over 30 users from 22 local radio stations were online at any given time. The portal facilitated the sharing of talking points, story ideas, treatments, guest and audio. “They loved it,” says Simcock. The qualitative and quantitative feedback was very positive. "I find the portal helps me to feel part of a massive operation," wrote one Local Radio Breakfast Producer. “Quite often when you are sat on your own at 5am in the morning, the portal helps you to realise the size and power of the BBC. The portal has helped me create great must-listen to pieces of radio by tapping into the resources and expertise of other BBC workmates and asking for their help or opinion."

Now mid-morning programmes want to put their material on the system, says Simcock. “The more people use it the more they want to. Producers have now realized that it is good for live programming – it’s far quicker using tools like live chat and such.”

“One really important point,” says Simcock. “As the project progressed we simply iterated the site and worked with the portal team to improve, amend and change things – this kind of fast flexibility just isn’t possible with existing systems. The Portal is very adaptable.”
Quickfire

A feature of growing importance in the Portal is called Quickfire. This is intended to become an internal editorial intelligence network: a very fast way of getting information into the system any way you want and making it universally available. For example, reporters in the field are given a text address that feeds straight into the Quickfire system. The Portal verifies the texts against the phone numbers that send them. Quickfire itself resembles a Twitter feed. On a big breaking story, the most pertinent of these texts can also be fed through to the main live BBC News Online site. Reporters were initially sceptical but quickly realised how easy it was. Eventually Quickfire is expected to contain a range of editorial assets from raw copy to finished scripts, authored on the Portal and available for multiplatform use. At present this material is housed in a wide variety of different places.

Peter Horrocks points out one of its key virtues: “The Quickfire system means everyone can see immediately what a reporter has sent in. That takes a huge amount of noise out of the system. Then – and this is the crucial thing - more time can be added for distinctive value added journalism.”

Quickfire Example: London Riots

During the August riots in England, Quickfire messages came in to the Portal from Birmingham, Nottingham, Salford, Manchester, Liverpool, Hackney, Enfield, Clapham and Southall. Some of the messages were supplemented by still images and video. Most of the messages were for internal consumption, but some made it on to the live page on BBC News Online [including a still image of a burnt-out BBC radio car in Manchester].

Here's how some of the messages came via the Portal and straight on to the BBC News Online live page:

2229: Peter Coulter, BBC News
Liverpool city centre has gone into lockdown with all shops closed from 6pm. A digger has been used in an attempted robbery of a Post Office in Bootle.

2157: Hasit Shah, BBC News
Enfield, in North London, scene of some of the worst rioting on Monday night, is very quiet. Met some residents who've told us they've been out tonight helping the police and looking after neighbourhood.

2154: Nick Garnett, BBC Radio 5 Live
Latest stores to be looted in Manchester - Diesel, Bang and Olufs, High and Mighty. Police now on scene. Eyewitnesses say looting took place an hour ago.
The Journalism Portal – and Quickfire in particular – is supporting a trend towards live pages on BBC News online carrying latest news, video, links and directions to relevant content. Crucially, because texts are coming from a verifiable source, Quickfire enables much of this information to go live with little or no production process.

**Mobile and remote newsgathering**

At the moment the full range of the Portal is only available to staff who can connect to the BBC Reith network, or connect into it via MyConnect. So in line with the BBC’s Technology Strategy, the BBC’s aspiration is for the Portal, as a web tool, to be accessible to journalists wherever they are working. Journalists will have the same level of functionality regardless of whether they are in a major base, a bureau or in a field vehicle that is IP-connected back to base. This will enable the story to be produced where it is best to produce it.

For smartphones and mobile devices the aim is for the Portal to be a mobile application offering the ability to search material, engage with the collaboration tools and author material. This will offer a correspondent the ability to publish and update right the way through to one of the BBC’s online platforms.

**The Technology behind the Portal**

"The software, the underlying infrastructure and the entire product end-to-end has had to be Agile in all senses of the word. The BBC needed a product, and a programme to deliver it, that was as dynamic as the industry it was supporting."

Kieran Harvey, Head of Technical Delivery, BBC Journalism Portal

**Architecture:** The architecture of the underlying SharePoint platform was co-designed with Microsoft to BBC Technology standards. That was combined with the associated networking infrastructure, designed to deliver very high availability, with the level of redundancy that a business-critical system demands. The servers are split across two primary locations in London. This allows for the realities of server patching and maintenance as well as disaster scenarios.

The system is currently based on physical servers. Plans to migrate to a fully virtual platform are being considered in order to speed up the expansion to support emerging requirements. Modularity and scalability are essential. The BBC has taken a key decision to centralise the core server infrastructure, designing a system that is capable of servicing the very large user base spread across the world. This has eliminated distributed infrastructure costs and maximized the expertise centrally to support and develop the platform, reducing costs at the same time.

**Development methodology:** To match the evolving demands of the BBC News Group, under the direction of BBC Technology, the Portal team adopted an Agile methodology for the development of the system. Working to a high-level product roadmap, new functions are developed with journalists, and prioritised to keep step with the rapidly evolving needs of the business. This ability to respond quickly and flexibly is vital to the success of the Portal and BBC News Group.

**Integration:** Common standards and open interfaces, a key tenant of the BBC Technology Strategy, are vital in a Portal manipulating content from a variety of different sources and systems. A service-orientated architecture is being adopted across BBC technical systems, alongside a requirement for standard protocols such, as SOAP or REST.

**Transition: the challenges**

"One of the things we’ve discovered here is that once people work with the portal they ‘get it’ – its advantages are just so clear – the convincing comes in the use…”

Mariita Eager, Head of Change for BBC Global News
The Journalism Portal represents at least as much of a cultural change as it does a technical one. It is a new and different way of working. As such, the introduction of the Portal represents a significant challenge for the News Group’s leadership team.

Peter Horrocks, Director of the Global Division, has made the introduction of the Portal a key and urgent objective for all editorial leaders at the World Service. He is clear that, for the Portal to achieve its full capacity, it needs everyone to participate: “It is the fully networked, matrix nature of the system that maximises its benefits. If Washington, for example, just decided that it wasn’t going to take part in the Portal, then it doesn’t just affect Washington – it affects Washington’s relationship with Pakistan and Nairobi and so on. All these benefits get lost…” Rainer Kellerhals, Global Media and Entertainment Solutions Lead at Microsoft, put it simply: “It’s like a telephone network… the more people you have the more effective it is. If there are only two people on the network it’s not much value.”

The BBC is still at a relatively early point in the rollout of the Portal, but a number of cultural and technological issues will need to be resolved for the system to achieve a full rollout.

Some of the requirements of the Portal – tagging and adding metadata for example - can seem as though they are adding to workloads. But the system requires a community approach: unless journalists make the extra effort, they in turn will not be able to benefit. “I don’t think what we’re doing is very complicated in technical terms,” says Simon Andrewes, “but it’s a challenge making people feel they are part of bigger, wider organisations.” To work, the system requires what one editor described as a kind of ‘social responsibility’.

At the moment, journalists working on programmes or in output areas appear to be less aware of the Portal and its benefits. Arguably, the smaller and simpler your operation the less immediately obvious its relevance to your area. “For the journalists and teams who have already made the cultural shift to sharing, this tool lands easily and enables them to live that culture. More self-sufficient teams have yet to make the change in mindset…” says Mary Hockaday.

Existing systems – or functions of those systems – will have to be turned off as the Portal gains traction. Some argue that the Portal will only fully gain traction when these other functions are turned off. Inevitably, as with all change, there is some nervousness about ‘cutting ourselves off’ from established ways of working. The move to W1 is like to be a key turning point here.

Journalists will also need to understand the Portal’s filtering systems in order not to be overwhelmed. “The web is infinite,” says Mary Hockaday, “but who’s got time to do infinite? So we mustn’t think this is the answer to everything.” A journalist working on the BBC News Channel with a 20-minute deadline will need effective filtering and search terms.

There is also an interesting communications challenge for leaders in arriving at a clear articulation of the Portal. Because it is still relatively new - and so flexible - it means different things to different people. Again, the BBC is not alone. “There is a huge communications task to arrive at a clear narrative,” says Robert Amlung, Head of Digital Strategy at ZDF.

Organisational strain is another issue. Alongside the normal day-to-day pressures, leaders in BBC News Group are dealing with a range of tough financial efficiencies, very complicated moves to new premises and some significant editorial challenges, like the 2012 Olympics.

Despite these challenges, a recent staff survey about the Portal produced positive results. In response to a range of questions, a majority of staff said the portal was making their job easier, that finding information was quicker and, encouragingly, it was leading to better output. “Programmes are realising that the value they get from sharing outweighs the risk,” says Simon Andrewes. Some programmes have found that the Portal makes handovers between teams much easier than previous systems.

Two main challenges were raised by staff in the survey. The first related to technology. The Portal has been built using the latest application version. But for users on old PCs, the Portal can seem slow compared to
existing production systems, log in times can be long and resilience is seen as an issue. BBC Technology are leading a PC refresh across the corporation that will tackle these issues.

The second issue was the point most raised: the system needs a critical mass to be truly effective. Heavy users of the Portal are impatient for all journalists in BBC News Group to join the system.

**Tagging and Metadata**

“I’ve come round to recognizing the fundamental importance of metadata as we go forward, because if you’re thinking about opening up sites … metadata is what you do, and it will never work without it.”

Mariita Eager, Head of Change at BBC Global News

“A little bit of labelling goes a very long way.”

Simon Andrewes, Programme Director, BBC Journalism Portal

Metadata and tagging is not important if you have no intention of sharing. But if you do want to classify material and make it searchable, metadata and tagging are crucial. Adding metadata categorises your content and allows it to be easily retrieved by searching, instead of browsing.

Some, indeed most, metadata can be added in a very structured way with pull-downs, check boxes and databases that add information like dates, author and basic tags. In the Portal, tagging can obviously say ‘relevant to certain stories, specialisms, programmes or newsgathering teams’.

Adding metadata and tags is not without its cultural challenges for journalists who have grown up in radio and television and have never experienced the need for it. Mary Hockaday observed: “It will take some adjusting to, but it’s fundamental to the future.” But at World Service, Delia Radu says that the discipline of tagging started with forward planning teams and spread to the ‘on-the-day’ teams: “It’s now just become a way of life.”

**Training**

Training journalists to use the portal has been done in a variety of ways. At Bush House, the home of the World Service, up to 8 people at a time had short training sessions on computers, followed in some areas by floorwalking and ad hoc one-to-one sessions. “Floorwalking has been hugely helpful to develop initial engagement,” says Mariita Eager. Lead users have visited programme teams for an hour at a time in some areas.

But almost all users have found the Portal user-friendly and intuitive. Anyone used to using Facebook or other social media tools will find it instinctive.

Some areas have found that it requires little or no training at all. Others have started by training one or a few people in a team who then guide the others. Some editors mentioned how early enthusiasts in their team have helped drive the transition through.
Driving efficiency

“We’re going to see real reductions in the number of people delivering our newsgathering in the way we have in the past, so we’re going to have to exploit, in the best sense, far more of the original journalism we do in the English Regions, the Nations, the Language Services and the Programme Department.”

Helen Boaden, Director of BBC News Group

“When the Portal starts to work well, as more and more people use it, you begin to get a sense of the huge amount of material the BBC is generating. It then becomes very easy to spot duplication. So it’s easy to see how the Portal can make our working lives more efficient.”

Barney Price, Assistant Editor, World Service News

The BBC would not be investing in the Portal if it did not think that it will lead to more efficient ways of working. BBC programme-makers treasure the unique nature of their individual programmes; ‘scoops’ are often closely guarded by the originators. But if preserving programme distinctiveness and exclusivity are a challenge, the financial and efficiency challenges are far greater. The BBC, like other news organizations, simply cannot afford any duplication.

It is hoped and expected that the Portal will help support the number of job losses the corporation is currently facing. In addition, it is expected to reduce the numbers involved in planning, drive more efficient multi-platform commissioning, avoid low value commissions, support the integration of departments and save people time. One of the key aims is to make much more use of shared ‘building blocks’ of content and information which can be quickly and easily refined or reversioned.

In all these aims, the Portal is a key driver for BBC News Group in the moves to W1 and Salford.

III. THE FUTURE

“The journalist of the future will have more time for ‘on the ground’ and ‘in the trenches’ work as the investigative power of their desktop becomes immense.”

Martin Guillaume, IBM Media Industry Leader, UKI and N Europe

The need for speed and adaptability

“We’ve been living in a world of very mature broadcast technology where it was quite easy to say, ‘please go away and build a system for us’ or ‘this is our functional requirement, how does your spec line up to that? Yes, we’ll have one of those.’ We’re now in a rapidly changing world where, as a broadcast industry, we’re trying to shift our technology into an IT world, which opens up lots of opportunities for integrating our systems, technologies and workflows in ways that we haven’t before.”

Peter Coles, Technology Controller, BBC Journalism

Many of the more traditional newsroom computer system providers are developing a wide range of features to meet this new world. But one of the challenges they face is in how quickly they can iterate and develop their systems to meet the rapidly changing needs of news organizations.

The BBC is finding that some of the changes to the portal are being driven by big stories. “Every time a big story occurs, we seem to get requests for us to adapt and change the technology and the workflow for the journalist,” says Peter Coles. The so-called Arab Spring and the surge of social media around it helped drive the integration of Twitter into the Portal. Conflicts in the Middle East - Egypt and Libya in particular - have also driven the development of the Quickfire system so that journalists on the ground could feed directly into the system.

The question is how to match this need for rapid changes with a third-party supplier roadmap that, quite naturally, has a timeframe around it of a release cycle, where there may be one or two releases a year with new functionality. “With developments like IPTV on the horizon, we haven’t begun to understand how audience behaviours will change,” says Peter Coles. “So we will need to be very flexible in our approaches. Our traditional newsroom systems and platforms are based on long release cycles and timetables. But we
will need front ends that allow us to quickly develop out own 'apps' - to iterate and develop new workflows and aggregate the back end systems."

The BBC has taken the lead in designing the technical specifications of the Portal: much of the development has been done by the BBC itself. For example the live chatroom webpart was developed by the BBC as was the ‘plumbing’ behind the planning database. All of the components of the Portal can be moved around or replaced so new pages can be quickly built or adapted to meet specific business needs without needing specialist development skills.

**Integration with other systems**

“Old style newsroom systems – like those at ZDF and the BBC - have a workflow ingrained in them from the good old days when we worked in one medium. They don’t easily allow the integration of internet-related open tools that you would expect today. The industry has been talking for years about how to escape this dilemma; to achieve something more open technologically and in a way that allows us to reconfigure quickly.”

**Robert Amlung, Head of Digital Strategy, ZDF**

One of the most important technical issues raised by the Portal is the interface between it and the other systems and the ability to bring in information from those systems and sources such as the newsroom computer system, Twitter, the wires and – where possible – publish back to them as well. “In one sense, the Portal’s planning and collaboration tools are the easy bit,” says Peter Coles. “Integration with the workflows of other systems is much harder and will produce many significant technical, organisational and workflow-related challenges.”

**Martin Guillaume, IBM’s Media Industry Leader, UKI and N Europe** agrees: “It’s very clear that there are much broader needs in a newsroom than any single vendor can offer. No vendor has a coverage that is both adequate and future-proof. Therefore the vendors have to be open and to be able to integrate various tools.”

For the BBC, the next stages of the Portal are to begin to open up these ‘vertically integrated’ newsroom computer systems so the Portal can inter-relate with the information that’s held in that vertical stack in a much more open and iterative manner. “I would like to see the data within a production system completely available through an open API [the technology that enables websites to interact with each other],” says Peter Coles. “I would also like to see the ability for us – through that API – to be able to pull out selectively from the newsroom computer system and selectively push data back into it.”

The vendors of existing news production tools are making efforts to open up their systems. ENPS has already developed prototypes of portlets that allow ENPS functionality in terms of running orders and other areas to be exposed to the portal. They are looking at other ways the portal can control how content created in ENPS is presented with content from other sources.

But some industry leaders believe the heritage of these systems is one of solutions for individual journalists in a single medium: that, thus far, they are not designed with collaboration in mind. "The next generation of systems will need to be invented with collaboration in mind and ought to take advantage of the sharing platforms already out there rather than re-inventing the wheel," says Rainer Kellerhals.

At the moment there is no standard for taking third party applications and bringing them together to build a mash-up journalism system. Obviously, MOS [Media Object Server] protocol has had a huge and positive impact in how iNews, ENPS and other systems tie in to third parties. But as yet there is no successor.

It is highly likely that there will be a broader industry need for a more standard model for creating these mash-up systems, where you have many different silos of information that play a critical role in news production. Not every company has the wherewithal to go out and develop a customised portal.

Away from the theory, the day-to-day reality of this is set out by Barney Price: “We are still using ENPS for running orders. We use ENPS for a finished product we want to hand over to output teams. But we have to
cut and paste them in. It's cumbersome because we have to lift out of one and in to the other. It would be much better if the two systems could talk to each other more seamlessly.

**Different solutions for different organisations**

Systems like the portal are likely to be applicable anywhere. Although the BBC has greater scale than most other organisations, the workflow challenges are consistent with anywhere trying to cope with multi-media output and production, be they broadcasters, newspapers or anyone combining text, video and audio content. The larger, more distributed and diversified the organization, the greater the benefits.

This kind of system will still be useful for smaller organisations, though the smaller the user, the more likely it is that they will want to use a standard system out of the box. To that end, for some organisations, newsroom production systems like that used by the BBC [ENPS] will not just need to feed into a portal – they may need to be the Portal.

“At the BBC, we’re working on portalising parts of ENPS to make them discoverable in the context of the BBC’s larger Journalism Portal,” says Lee Perryman, Director of Broadcast Technology at Associated Press, “outside of the BBC we envisage ourselves as the portal, as a way of unifying the content and making the aggregation and production a fully integrated concept.”

“The BBC is different and represents a different set of challenges,” says Perryman. “ENPS IS the portal everywhere except at the BBC where there has been an expression of a need for a different portal strategy.”

But others see this as precisely the challenge for the producers of these systems: moving from a model structured around being the provider of a newsroom computer system to a model where they feel much more comfortable about working with other technology suppliers. This might mean ceding control of some of the relationships around integration. Robert Amlung, at ZDF, says this is a difficult situation for the manufacturers of newsroom production systems. “These are, technically, very old systems and I think they should just restart from scratch. To just keep extending these systems technically is just not possible.”

**Wider industry applications**

The BBC is not the only organization developing a portal based on a sharing and collaboration platform.

One of the few organisations that can claim to be more dispersed than the BBC is Gannett, the US’s largest US newspaper publisher. It has more than 80 papers, hundreds of websites and a number of TV and radio stations. The company has grown through acquisition. But the problem it faced was that each of these outlets had its own autonomous editorial system. Planning was being done in silos with no visibility across those systems. “There was simply no way to gain insight into all that information,” says Gary Gunnerson, the IT architect in Gannett’s ContentOne group.

Gannett’s needs were similar to those of the BBC: an efficient system that would change the culture around sharing information internally about story ideas and the resources assigned to develop those ideas. “We also needed a solution that we could adapt on the front end to meet the unique needs of each individual organization—and that we could evolve quickly and efficiently as those needs change over time,” says Gunnerson. Gannett also built its portal on a collaboration platform and worked with a third party, Atidan, to develop its own system for editorial planning across the group. This has driven a culture of sharing across the group and greatly reduced what they realised was duplication of effort in different outlets.

A smaller example is the German newspaper, *Stuttgarter Zeitung*. It has a strong local and regional focus, but also has significant supra-regional, national and international sections, covered by separate editorial departments. It needed to connect three editorial teams in three different cities. Stuttgarter Zeitung also took a ready-built tool and constructed its own functionality around it. Journalists can book resources and request photographers; existing systems like the image archive and SAP have been integrated into its portal.
News organisations are watching the development of the BBC system closely. ZDF, for example, are at the prototyping phase. They have yet to roll anything out and are in the process of deciding on which software they will develop their system. A range of other work is going on across the industry in areas like the evaluation of textual analytics and data linking, as well as the development of unified production tool kits, created by taking the core functionality from different production systems and bringing them into a single system.

**Industry developments**

Many of the newsroom computer systems available today have served news organizations extremely well in terms of managing built, linear programmes, centred around running orders. Industry leaders seem to agree that, like the BBC, they want to keep systems that automate scripts and running orders. “The Portal is not envisaged as a replacement for ENPS,” says Simon Andrewes. “Jupiter [the BBC’s Video Edit & MAM system for journalists] and ENPS will all exist around the portal, but preferably integrated – if they can talk to each other.” Planning and development of content will happen in the portal, culminating in a choice about where and how to publish.

AP says it will place a lot of emphasis in future development on UGC, social media and non-traditional forms of newsgathering from as many sources as possible. Their Version 7 of ENPS – due to be released in 2012 – is planning to link stories and content, automatically finding other journalists and resources engaged on similar topics - functionality not dissimilar to that which the BBC is building in their Portal.

When a journalist plans a future event in the assignment calendar, the calendar itself will ‘listen in’ to websites and social media for other people who are talking about the same thing that you’re planning to cover. So that when you actually get to the day of the coverage you have all sorts of angles, and potential other sources and resources. “And you didn’t have to go look for that – the system did that for you. That’s a huge deal and that will make it easier for people to be able to tell better stories and to be more competitive,” says Lee Perryman. “One guy working on a story suddenly becomes an expert.”

Software companies are responding to the challenge. Microsoft has developed the ‘Microsoft Solution Framework for Editorial Collaboration and Mobile Journalism’ to demonstrate to media organisations how its own collaboration software can be used in a media setting. ‘Solution Framework’ seems an appropriate name: software like that offered by IBM and Microsoft, out of the box without some configuration remains pretty much meaningless. They need data structures, workflows and user interfaces to be really useful to an organisation.

Rainer Kellerhals believes BBC is leading the industry into the next generation of editorial collaboration systems: “Very few organisations besides the BBC would have the internal knowledge and skills to guide the design in the way the BBC requires.” Other organizations are likely to prefer working with a partner to help them reach the solutions they want. “It probably is the case that we are increasing the amount of technology development work that we are handling in house than perhaps we were several years ago,” says Peter Coles, “but that has a lot to do with the pace of change and the maturity of the technology. This is new ground.”

**Conclusion**

These are still relatively early days for the Journalism Portal. But the BBC has seen enough successes to commit to this type of technology and approach. The Portal is starting to add speed and depth to its journalism, driving a culture of change around knowledge sharing and collaboration, changing workflows and supporting efficiencies. It is a new way of working that will bring with it some cultural challenges. But there is a genuine commitment to the Portal from leaders across the BBC News Group.

The BBC is not alone. What is happening there reflects changes across the whole industry. News organisations are looking for technological solutions to cope with more multi-tasking across a wider range of media from a growing and changing array of sources. They are also trying to work out ways of integrating the various systems they already have in a way that can adapt to a future that keeps changing in front of their eyes. If the BBC is leading the way now, others are catching up.
Portal technology does seem to provide solutions to many of these challenges. It allows for adaptation that is iterative, continual and relatively fast. But it raises real challenges around the ability to easily integrate with traditional systems and the ability of those systems to adapt rapidly.

When Yogi Berra said, “The future ain’t what it used to be,” he could have been talking about journalism. We are witnessing dramatic changes. The speed at which we can identify, verify and broadcast information has accelerated to a point that was beyond contemplation 10 years ago. The BBC has committed itself to the Journalism Portal - and to portal technology - as one way of future-proofing itself against the further dramatic changes we have yet to imagine.
The Libya ‘story page’ – a search-driven view pulling together internal and external information from different systems into one place
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V. ABOUT THE AUTHOR

Vin Ray is a writer, coach, consultant and Visiting Professor of Journalism at the Bournemouth University Media School. He left the BBC in 2010 after a 23-year spell in which he had been Foreign Editor, Executive Editor, the first Director of the BBC College of Journalism and, for five years, a member of the BBC’s Journalism Board.

He joined the BBC in 1987 and worked as a producer on the Nine O’Clock News under the editorship of Mark Thompson. As a foreign field producer, Vin worked on many stories, including the first Gulf War, the Gorbachev coup, and the Bosnian war. In the UK he was in charge of the field operation for the resignation of Margaret Thatcher, as well as numerous IRA bombings.

He became the BBC’s TV Foreign Editor in 1993 and two years later became the bi-medial Foreign Editor across domestic TV and radio. In 1996 he was asked to merge the Newsgathering operations of the BBC World Service and the domestic News and Current Affairs, becoming World News Editor - the first person to take charge of the BBC’s entire foreign newsgathering operations.

In 2004, he was awarded the Dart Centre’s ‘Distinguished Media Leadership Award’ at a ceremony in New York.

In 2005, following the Hutton affair, he was asked to set up the BBC College of Journalism, which he ran until he left the BBC in 2010.