

Forbidden Technologies plc
The web's video production platform

Introduction

The web has enabled many industries to re-invent or transform their ways of working, often changing the way in which both consumers and businesses can participate. **Forbidden Technologies is leading the transformation of one sector that is still relatively untouched - editing and post production for television and video.**

Forbidden's goal is to become the recognised standard for web based video post production. Its strategy is to lead with a product for the professional market, closely followed by an offer for the long tail of semi-professional video producers. In parallel, it plans to deliver a market leading platform for user generated video (UGV) through strategic partnerships with major internet companies.

The video industry

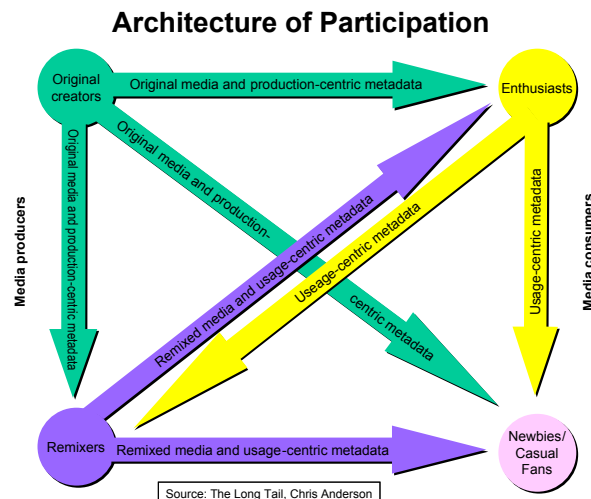
The production of video content is just beginning a major transformation driven by market changes. Powerful computers and high speed web infrastructure are now in place. The quantity of video being produced and viewed has exploded with the growth of digital and web TV channels, video on the web and now the filming and viewing of video content on mobile phones.

In other market sectors, the web has transformed the way customers behave, businesses deliver value and industries work. The consumer is now intimately involved, whether by trading goods through eBay, through blogs and social networks, or acting as a citizen journalist and feeding content to the large media companies as fast breaking news.

In the last couple of years, consumer consumption of video has grown rapidly. Video on the web has been given focus and legitimacy by the emergence of websites such as www.youtube.com and www.myspace.com which are now both top 10 sites. It is estimated that transmitting video now consumes around 90% of the internet's bandwidth.

For media professionals, the rapid increase in the number of channels and consequent demand for content has not been accompanied by a corresponding increase in budgets. Addressing this challenge needs a transformation in the cost of production and/or ability to reuse content in order to be economic without having to compromise quality.

In addition, as Chris Anderson said in *The Long Tail*, "the traditional line between producers and consumers has blurred. Consumers are also producers. Some create from scratch; others modify the work of others, literally or figuratively. In the blog world, we talk about 'the former audience' - readers who have shifted from passive consumers to active producers, commenting and blogging right back at the mainstream media."



Video consumers

ABI research predicts that globally, a billion consumers will be watching internet video by 2012, up from the current 300 million. In the US, eMarketer predicts the number of people watching internet video will rise from 114 million in 2006 to 183 million by 2011, then representing 86.6% of the total US internet user population.

The popularity of social networking sites has played a big role in the growth of online video. Consumers embed clips in their personal profiles and upload video content to engage and entertain their friends and family.

The use of online video advertising has both tracked and contributed to the rapid growth of internet video. eMarketer predicts that online video advertising spend in the US will grow from \$410 million in 2006 to \$4.3 billion in 2011.

More and more video is being watched on mobile phones and most of it is downloaded from the internet. There are over 2 billion mobile subscribers globally, which compares with roughly 1.4 billion televisions and 1 billion PCs worldwide. In the US, eMarketer predicts that spend on mobile multi-media ads will grow from \$11 million in 2006 to nearly \$400 million by 2011.

Video producers

The rapid growth in the number of TV channels and web/mobile sites that provide video is fuelling an explosion in video production. Productions range from high quality film and television shows to user generated video shown on third party sites and personal videos.

In professional production we are seeing the growth of multiple uses of content, either across channels or reused and combined in different entertainment formats. To support this, broadcasters need efficient archiving and retrieval systems as the average revenue from a single showing of a video or television programme is declining. Powerful digital reversioning tools allow them to control costs and reduce time-to-air. As broadcasters grow their content portfolios the physical constraints and costs of storing this content safely increase. Changing working practices and infrastructure to adapt to a fragmented media market is crucial for survival.

At the other end of the market, the long tail of producers of user generated video need the ability to access and combine video from a wide variety of sources. Ready access to third party content, the ability to integrate their own content in whatever source and format, storage and access from anywhere, and a simple tool to create the videos and distribute them through any channel will drive usage.

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Forbidden started working on a web-based solution for the video market in 1999. Contact with professional editors since the 1980s and extensive knowledge of video, internet and mobile phone technologies give the company a unique combination of capabilities. Through the twists and turns of the growth of the video market and the development of web and mobile infrastructures, Forbidden has built the first (and most advanced) web based video post production and publishing platform.

The platform combines uploading video, storage, retrieval, post production tools for review and editing, and publishing/distribution in many formats across all channels. A single platform provides different user interfaces and features for each market, covering a range of professional uses, through user generated video/citizen journalism, to consumers. Marketed as software as a service (SaaS), it can be accessed remotely from any computer on the internet.

Benefits of a web based video platform

Forbidden's video platform is offered as two web based services, built on a common core of code: FORscene for professional and semi-professional use and Clesh for consumers. Using the web for delivery gives clear benefits to the whole range of users.

	Existing Applications	New Applications	New Companies	New Users 'Long tail'
Drivers	Reduce time/cost	Enabled by the technology, faster internet and CPUs	Made possible by the technology, faster internet and CPUs	Exist as a consequence of the technology, faster internet and CPUs
	Replace systems			
	Renew workflow			
Examples	Wide area review & approval	Reality TV	Internet video companies	New professionals
	News monitoring	News/content redistribution or reformatting	Niche/low cost production houses	New amateurs
		UGV	Niche broadcasters	DIY family websites
		Archive for reuse		
		Web video news		

Using FORscene, broadcasters and independent production houses no longer need to re-equip with expensive capital equipment: the editing software runs on their existing infrastructure. Existing PCs or Macs can be used to upload content to the platform or dedicated Linux based hardware can be installed to improve throughput and uptime. The web-based approach allows rapid dissemination of upgrades to all users, giving the typical user the impression of total reliability. Internet access allows production teams to expand and contract as deadlines come and go without needing new equipment to be installed or configured. The platform is designed with the needs of the non-expert user in mind. The system is easy to learn and use, minimising the training time needed to bring new people into the workflow.

For new media companies and content aggregators, FORscene provides a wide range of input and output formats allowing material from a variety of sources to be combined seamlessly. The built in content management system (CMS) allows material to be located efficiently. The powerful editing system allows new material to be cut together with archive material to create relevant and entertaining content. The publishing capability allows finished content to be made available in a range of formats to media consumers, and the built in hosting allows websites to include videos without any need to consider bandwidth and delivery issues.

For semi-professional and occasional users such as companies, wedding videographers and staff and students on university media courses, FORscene is a one-stop shop. It allows video straight off the camera to be edited and combined with graphics, titles and additional audio sources such as music before being exported at anything up to broadcast quality to tape, DVD, the web or a podcast. Running on the internet, it can be used from any location, on any computer and with any number of users, without installation or configuration. Its shallow learning curve makes it ideal for the occasional user.

For individuals, ease of access is the key. Clesh, FORscene's consumer sibling, works without installation or configuration on PCs and Macs. Its simple storyboard allows rapid editing. Video and audio levels can fix up consumer level lighting and uneven sound levels. Accessibility extends beyond being quick to learn and simple to use: individuals can access their material from any computer – at a friend's house or even an airport cybercafé. And once

video is published, it plays back through firewalls on PCs, Macs and Linux without any installation or configuration.

The main features of the platform and their applicability to particular groups of users are shown in the table below.

	Professional (High Cost)				
	News & Sports	Reality TV	Drama	Semi-Professional (Low Cost)	Amateur
Customers	Broadcasters, Production Companies, Post Houses, Facilities			Websites, New Media Companies, Content Aggregators, Individuals, Universities & Colleges	
Multi-format upload, storage & retrieval	●	●	●	●	●
Remote content hosting	●	●	●	●	●
Remote access & usage - PC or Mac	●	●	●	●	●
Searchable Metadata and Archiving	●	●	●	●	●
Post Production	●	●	●	●	●
Integrates with AVID and Final Cut Pro	●	●	●	●	
Review, including live review/edit	●	●	●	●	
Logging		●	●		
Shot Selection	●	●	●	●	●
Assembly Editing	●	●	●		
Offline Editing	●	●	●	●	● Simple
Online Editing	●			●	
Auto-conform	●	●			
Moderation				●	●
Collaboration & Chat / Community	●	●	●	●	●
Publishing multi- formats & screens	●	●	●	●	●
Account Management & Access Control	●	●	●	●	●

Recent Customer Projects

Logging and Shot Selection: Granada, "Marbella Belles"

The production team on Marbella Belles needed to be able to review footage both on location in southern Spain and in the UK, to add logging metadata and to select shots for programme episodes. Rushes were loaded into FORscene for review by the camera crew and production executives. Searchable logging metadata was added by a team split between London and Marbella. The producers could search, using the logged metadata, and identify appropriate shots for capture into their finishing system at full broadcast quality.

Library and Archive: Save the Children, Healthcare in sub-Saharan Africa

Save needed a quick and easy way to show their footage to producers of breakfast television shows prior to a 'tour of sofas' by Midge Ure, their leading fundraiser. Video of the healthcare project was uploaded into FORscene and logged to make it easily searchable. Usually, Save would prepare and mail tapes of all their material. This time producers were emailed with log-on details for the FORscene account where they edited together the shots they wanted. The edit decision lists from FORscene allowed Save to mail tapes of their requested material and their video was included in every one of the morning bulletins targeted.

UGV with Moderation: Mr. Paparazzi

Darryn Lyons, the original 'Mr. Paparazzi', owns a celebrity video pictures site with an unusual business model: fans can get paid for uploading pictures of their favourite celebs. Darryn wanted to extend the model to add video, to take advantage of the increasing numbers of video capable camera phones carried by young fans. Embedding Clesh into the Mr. Paparazzi site gives fans an easy way to submit video over the internet and choose their best shots for submission to Darryn's moderation team. The moderators finish the clips (if necessary) and use the built in transcoding facilities to prepare the videos for web delivery or broadcast.

News Review: BBC News24

The production team on News24 want to give journalists access to a record of their broadcast signal, to help with training and the preparation of follow-on stories. A rolling seven-day's worth of video, captured from the broadcast feed, is loaded into FORscene and automatically divided into one-hour files. A journalist in the field can access the footage over a broadband link using a web browser, find the particular shots (s)he wants and either view them there and then or save a local copy for download or later review.

Citizen Journalism: IBC Citizen TV

The International Broadcasting Convention (IBC) is the largest and most prestigious broadcast conference and trade show outside the US. IBC prides itself on showcasing emerging broadcasting technologies and in identifying business trends; FORscene was chosen to support IBC's move into citizen journalism. Attendees uploaded footage to the IBC account for editing by a professional journalist and publishing to a dedicated site: www.ibccitizen.tv

Review and Approval: Canadian Broadcasting Corporation (CBC)

The executive team at CBC Arts & Entertainment commission many of their programmes from independent production companies. To keep involved and monitor progress, they like to review and approve the daily footage as it is shot. These 'dailies' are loaded into FORscene and made accessible over the web for review and approval. Frame accurate comments are added as feedback and approvals are included in a separate, protected text viewing area.

Education: State University of New York (SUNY)

As their official newsletter puts it: 'Cayuga Community College's Electronic Media Programs remain on the cutting edge of technology by adopting a revolutionary new web-based video editing platform called FORscene ... The students are still in awe that they can edit anywhere – anytime – with FORscene'. The ability of students to work both in the College and at home, combined with the ability of tutors to give feedback and assistance to draft edits online through the built in chat system, make FORscene a perfect fit for a modern university.

Market Penetration

In each market segment, Forbidden's tactic has been to seek out a lead customer to work closely with to prove the platform, before moving on to promote to other participants. The table below shows some examples of this.

Market segment	Lead customer	Selected follow on customers
Independent production companies Facilities houses	All3media	Coach House Studios, Breathe Post
News	GMTV	BBC News 24, National newspaper
Universities	Ryerson University	Guelph, SUNY, Winchester, Northumbria
Charities, Promotion, Pressure Groups	Save the Children	SightSavers, O&M, True Tube
Broadcasters	Channel 5/ Granada	UK broadcaster, Granada/ITV, CBC (Canada), US broadcaster
Internet	Cantos	Claripoint
Clesh	Shareholders	Mr Paparazzi, True Tube

Conclusion

Through these customer projects, Forbidden's platform has been proved and stress tested in both the professional and consumer market segments. FORscene is sold to professionals through an annual license, with differing storage and access levels, locking in a recurring revenue stream. Clesh is implemented as a white label or co-branded product for content aggregators, again via an annual license. The platform has been used in the production of over 200 broadcast television programmes by leading broadcasters, independent production companies, content aggregators and universities/colleges in the UK, US, Canada, Italy & the Nordic region. The business is now organising for a world wide roll out of the platform through a range of distribution channels.