Cross-Media on the Advance

Jak Boumans

Electronic Media Reporting, Utrecht, The Netherlands

1 Introduction

The term cross-media is not unequivocal. It means different things in different disciplines. Yet, there is a common core. In printing and publishing it usually means the usage of multiple media for making the content more accessible. Publishers sometimes add a CD-ROM to a book production in order to make the full text searchable. In an Internet production cross-media refers to reaching efficiency on more than one technical platform or making the process scalable to large amounts of people or screens scalable to the size of the equipment. In marketing the term cross-media is confused with "cross-channel", the use of multiple distribution channels (bill boards, print advertisements, and television advertisements). But cross-media has also penetrated into E-Learning and tourism.

Although there is no straight forward definition of the term cross-media, it can best be described by five criteria:

- Cross-media involves more than one medium, ranging from analogue to digital media or digital media only, which all support each other with their specific strengths;

- Cross-media aims at an integrated production;

- Cross-media content is delivered/accessible on a range of devices such as PCs, mobiles, TV sets or set-top boxes;

- The use of more than one medium needs to support one theme/story/ purpose/ goal/ message, depending on the type of project;

- Cross-media does not just exist by the juxtaposition of different devices and platforms, but finds its relevance when the common message/story/goal is spread on different platforms, and when the supporting interaction takes place on these different platforms.

> Essential to the concept of cross-media is that there are more than one me-
> dia/distribution devices involved, which support the central theme of the pro-
> ject with their own strengths.

In this chapter we will present a short history, the impact on the content production chain, the application fields, the technology, business models, and finally discuss the future of cross-media. Before we do so, we will distinguish between cross-media and some competing terms that are often used as synonyms to cross-media:

- *Multimedia*: Digital information with integrated media types (text, image, sound) transferred by one carrier (CD-ROM/DVD, telephone, cable) and used interactively.

- *Interactive media*: Digital media asking for action on the user's side.

- *Multiple media*: The use of more than one medium.

- *Multi-platform*: The use of several technical platforms (transcoding, sending, accessibility, programming issues) to levy a message across several devices.

- *Integrated media*: Media that are integrated in one system for distribution to various platforms.

- *Converged media*: Media which are based on the same technical protocol, e.g. TCP/IP.

- *Hybrid media*: The distribution of the same content using a combination of analogue and digital media.

2 Short History

The term cross-media is fairly new. However, it was already around in the early days of electronic publishing. In the printing world cross-media was already known as *database publishing*. Towards the end of the 1970s encyclopedias such as the *All American Encyclopaedia* were stored in databases for print, for online (The Source) and offline (Laserdisc) versions. Later on, the term *multimedia* was, amongst others, misused by printers and publishers for *multiple media*. A book with a CD-ROM represented for them a multimedia project. By the mid-1990s, the term cross-media stood for content re-purposing in the publishing and printing industry. It was linked to the slogan "Create Once, Publish Everywhere" (COPE), a

term used by various people including Paul Zazzera, the CEO of Time, Inc. in 1996.

Towards the end of the 1990s, however, the term cross-media was spreading to the broadcast industry. The broadcast industry finally embraced the Internet from 1996 onwards, but usually this meant extra information about the programme on a PC screen. But in 1999 the content production company Endemol launched the reality television programme *Big Brother* in the Netherlands, and this was like a shockwave to the broadcast industry. The format of the programme centred on the theme of a group of young people locked up in a house, cut off from telecom and telephone communication. For the first time, the programme was combining analogue television, interactive cable, Internet, and mobile telephony and was supported by magazines and newspapers. The television programme *Big Brother* was a whole new way of conceiving a product/project, in this case a TV show, that changed. And this new way of "thinking", pushed most of the time by financial incentives (increasing the number of platforms and their accessibility means an increase of revenues) as well as the obvious interest of the audience, made the cross-media way of production attractive for many more industries. Besides the broadcasting industry, marketing, E-Learning and tourism latched on to the concept. In the broadcast industry the cross-media formula has penetrated into new formats, such as *Who Wants to be a Millionaire.*

3 Media and the Digital Content Chain

3.1 Differentiation of the Media Spectrum

The media world has changed a lot over the last years. Media such as radio, television, print, movie, and photographs were analogue oriented, using physical analogues such as electrical voltages. Reproduction meant a loss of quality. Digital media use numerical digits expressed in a scale of a notation to represent discretely all variables. In the process of copying a digital photograph, quality is not lost.
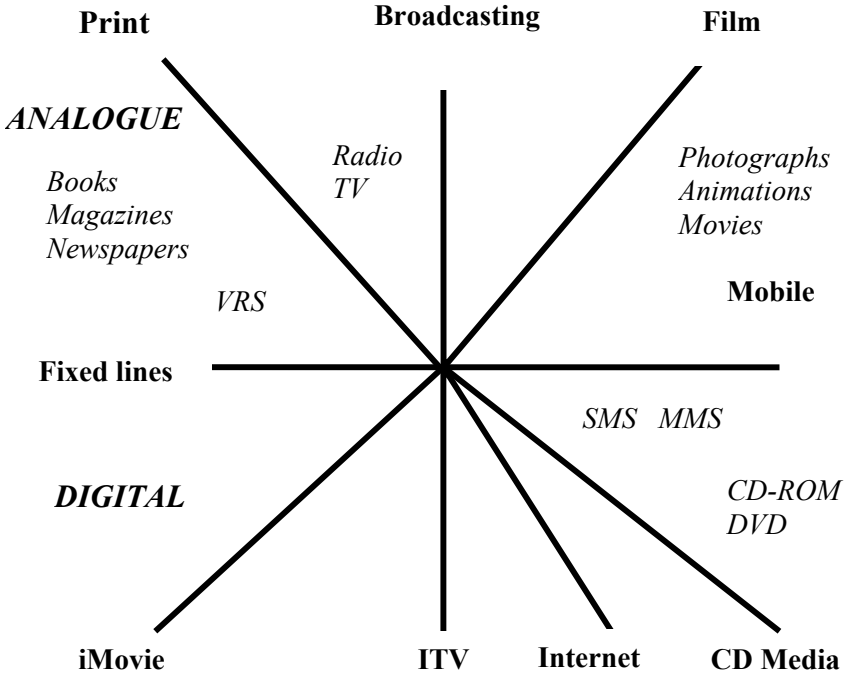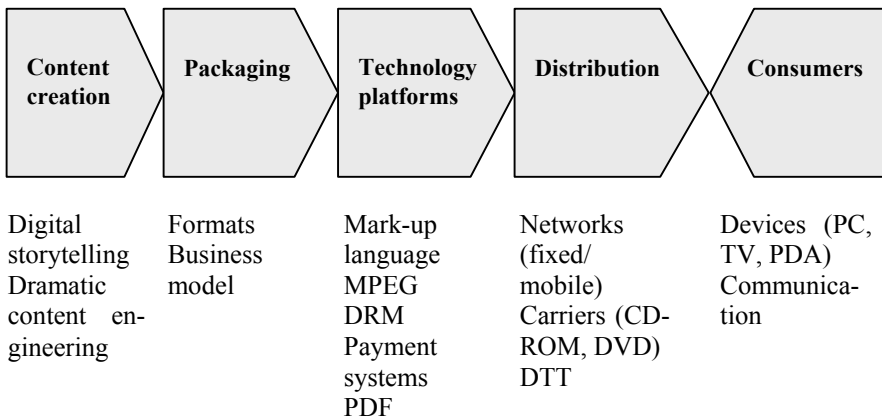
Fig. 1. Media spectrum

3.2 Digital Content

All the media mentioned above contain analogue and digital content (see also Figure 1). Cross-media has affected the content chain in several ways. Digitisation had already affected the chain. Content could be passed on without retyping, which led to a gain in efficiency. Multimedia led to interactivity. Now, cross-media has been affecting every link in the chain. In the content chain of the broadcast industry these changes have been noticeable in every link. In the printing and publishing industry, cross-media has been mostly centred on efficiency gain.

In book printing and book publishing cross-media has been limited to the technical platform. By adopting a standard mark-up language like XML it is relatively easy to produce a book and a CD-ROM in one go. For the consumer the only difference is that he or she can use the digital text of the book on a computer. The added value of a CD-ROM over a book is in

most cases also limited; the function of full-text searching has not often been used. In newspaper/magazine printing and newspaper/magazine publishing cross-media is applied to more effect, certainly when the Internet is used in combination with the newspaper/magazine.

For the broadcast content chain cross-media is having a bigger impact. Every link in the chain has been changed and even the link of the consumer has been turned around, as the part of the consumer has changed from receiver of a book with CD-ROM into a participant.

Content creation	Packaging	Technology platforms	Distribution	Consumers
Digital storytelling Dramatic content engineering	Formats Business model	Mark-up language MPEG DRM Payment systems PDF	Networks (fixed/ mobile) Carriers (CD-ROM, DVD) DTT	Devices (PC, TV, PDA) Communication

Fig. 2. The digital content chain

Figure 2 illustrates the digital content chain in a graphical manner. There are several relevant items:

- *Content creation*: Storytelling in the traditional broadcast industry was linear; digital storytelling offers more options for the users to choose their own path and/or their device.

- *Packaging:* A broadcast format is no longer just directed towards the broadcast schedule and perhaps to certain follow-up activities. These days a format is developed with the opportunities of the Internet and mobile telephony. The format is directly related to the business model, in which the exploitation opportunities will have to be defined such as charges for SMS and micro-payments for Internet previews.

- *Technology platforms*: In case of broadcasting the technology platform is involved in MPEG images for the Internet, but also in the Digital Rights Management, micro-payment systems, and SMS messaging.

- *Distribution:* The distribution of a cross-media project covers more than the terrestrial television network and involve cable, satellite, ADSL, and Digital Terrestrial Television (DTT), but also Interactive Voice Response systems on fixed line telephony and SMS on mobile.

- *Consumers*: Since the rise of print, consumers only received newspapers, magazines or books and could not immediately react to the publisher. In the digital content chain the consumer can directly react to questions from the programme maker by SMS, e.g. to vote or to partake in poll. It is one of the special possibilities offered by digital media. In cross-media these digital contact possibilities are used to stay in touch with users, allowing them to follow a story differently, feeling more engaged by having more ways to understand the story and participate in it. In fact these possibilities make users consume more. It increases, strengthens, and deepens the relationship with the end user.

The challenge for cross-media is how to mix (interactive) television, Internet, and mobile technologies to provide emotionally satisfying content. According to Christian Fonnesbech, a Danish producer, this requires developments in several areas "such as script-writing, production flow, business models, storytelling grammar for new media, and the distribution and penetration of the new product" (EC 2003, p 161).

3.3 Technology

Cross-media has been enabled by technology. Since the introduction of the Internet and the TCP/IP protocol, technologies are converging, networks are becoming ambient while the amount of devices is exploding. Content Management Systems (CMS) are being developed to deliver content through various outlets. Technical platforms are aiming at scalability in order to transmit data from main computers through various networks to different devices. Networks are becoming linked to each other so that a user can seamlessly move from his home network to a mobile network. Domestic, fixed line, satellite, and mobile networks establish an ambient or ubiquitous environment. Broadband is becoming a triple play network for television, Internet, and telephony. While this convergence and integration is going on, the amount of devices is exploding. PCs are becoming smaller as notebooks and PDAs. Mobile telephones are becoming 'smart', as they

become able to link to the Internet and to download songs and video clips. Also the change-over from TV to interactive digital television opens up new opportunities.

Therefore, cross-media is not based on a specific technology. It is rather based on the efficiency slogan COPE. This is rather easy to achieve in printing and publishing as mainly text production is involved, but gets more complicated with broadcast, market communication, and marketing where video, audio, and text is involved.

Cross-media has also another technological characteristic: scalability. Cross-media projects involve groups of people with various devices. In order to handle the traffic between provider and user, scalable software will have to be used, so as to react to a growing community of users with a particular device. Scalability will have to be achieved in the logistics of the platform and the distribution, but also in the content delivery to various devices.

3.4 Non-Technical Drivers

Cross media is not only driven by technology. With people moving about more often and further, cross-media projects have to deal with network technologies, which seamlessly let the user move from one network into another, from the domestic Wi-Fi network into the mobile network. The necessity does not grow out of the technological possibilities only, but also stems from the desire to move from one sphere to another, taking a book, music or video along.

Another driver is the community-oriented attitude. The Internet and mobile technology have been instrumental in establishing communities in an effective way. Where there are communities of stamp collectors in the non-virtual world, in the Internet world communities are becoming more pronounced. This is also the case in cross-media projects. Cross-media increases the VIP club feeling: users that will use all the media will feel closer to the story than the one only following the show on TV or just buying a book. The programme *Big Brother* has a fan club for people interested in everything that happened in the programme. With the new media this community could be served. At home the fans could watch television or the 24/7 cable broadcasts, and when going outside they could remain informed by SMS.

But there are also examples of communities which can create their own content to a certain level. The Finnish website for girls *Sooda* has its own games. On the site of *Outer Rim Putti minigolf TV*, users can design their own golf course projected on TV with their mobile.

This might be even more in the case with the blogging trend, whereby any Internet user can log his experiences and events on an Internet site. Any marketing campaign needs to include a blog now, allowing people to create and upload their own content. It is another way to deepen the relationship as well as increasing publicity in a viral manner.

4 Applications

Cross media can be implemented in various application areas in the media field such as print and publishing, broadcasting, gaming, market communication, marketing, and E-Learning. Below we will elaborate on these applications.

4.1 Print and Publishing

As said before, print and publishing have been using cross-media already for a long time. A driver was efficiency, but in newspaper and magazine publishing cross-media is used for marketing and market penetration as well.

Cross-media in book printing and publishing started out as media that were complementary to each other such as a book and a CD-ROM. An example is the book with the proceedings of the *Contessa* Conference on Cross-Media Service Delivery, held in 2003; together with the book a CD-ROM and an Internet site were published. In magazine and newspaper publishing, cross-media is used more extensively in order to bridge the time between publications by Internet services and in order to create a community.

In the most rudimentary form, the newspapers and magazines have an electronic counterpart. It does not really add to the content of the magazine or the newspaper, but reproduces the content of the magazine or the newspaper. Advantages of this include that a local newspaper can be read anywhere, e.g. when a subscriber is on the road. But more magazines and newspapers have complementary service on the Internet, on mobile devices such as PDAs, and on smart phones. These complementary services include a 24/7 news ticker, background information to a printed article or archive.

4.2 Broadcasting

In broadcasting the concept of cross-media has been picked up and worked out in productions. After *Big Brother* and *Who wants to be a Millionaire*, the programme *Weakest Link* was put on a disk with a virtual presenter, resembling the UK presenter. Cross-media does not remain limited to the traditional broadcasting companies. The French content company Push TVi set up CornerTV, a TV channel soon to be available in 6,000 bars and restaurants.

Combining ADSLTV with mobile, the company created a new entertainment format mixing a mobile game with video, advertisement, and information. These new hybrid formats are only possible because of the development and merging of technologies, as well as lowering of prices, which allows innovative business models to arise.

4.3 Gaming

In gaming portable devices such as the GameBoy and consoles have been in use. But by using mobile technology new cross-media concepts can be launched on television, ITV, and the Internet. In Finland Waterwar.tv has developed a multiplayer game in which waterguns are used to fight by sending text messages via interactive television and the Internet. In the UK an IST project *Can you see me now?* is using the Internet, while pursuers are using mobile phones, equipped with Global Positioning System software.

Another example comes from Nintendo, which launched the Game Boy Advance that was meant to be connected to the Game Cube. In this way a game could be played on TV with better graphics and a full story at home, but also when on the road, one could play a smaller side game based on the same storyline, but with less perfect graphics.

4.4 Market Communications

In market communications the cross-media concept has been used for reaching communities by multiple channels. In a study conducted by the Online Publishers Association/MBIQ (2002), an ad for the US Airforce was shown on TV and on the Internet and people were asked to recall it. When shown on TV 23% remembered to have seen it on TV. When shown on TV and Internet, 32% recalled to have seen it on TV. When people on the web were asked, 65% remembered, while 78% of people on Internet

and TV could recall the ad. Besides of reducing costs for creation, cross-media has thus a commercial impact, too.

4.5 Marketing

In marketing, cross-media has already proven its worth. In 2003 a financial company in Denmark used the soap story of *Anders and Henriette* on the Internet, a young couple that was going to live together, in order to promote their financial services. The series of 8 instalments attracted 30,000 visitors in sum; 90% of them re-visited the site. So the campaign resulted in making the name of the financial institute a brand name and delivering applications.

4.6 E-Learning

Cross-media in E-Learning has also been a promise right from the beginning. In the early days of cross-media the concept got no further than a book plus CD-ROM. But when the E-Learning concepts developed, it became clear that only a blend of E-Learning and "live learning" would result in effective learning. This way of blended learning is often aided by cross-media.

4.7 Tourism

In experiencing tourism, electronic devices are used to create synergies between local culture and commerce. One of the experiments in this area is *Visby Under* on the island of Gotland (Sweden). The experiment is a game which takes advantage of modern mobile technology for high level multi user gaming and location based services. In the first version (2002) the game consisted of mobile and live action gaming. The main narrative modus is live action, text, picture, and sound. In its full-fledged version (2003) the project integrates live digital-TV and more advanced audio-visual elements. Cross-media thus creates new opportunities for tourism.

5 Business Models

The question can be asked whether there is a business model for cross-media productions. Dealing with only the technology slogan COPE directed toward efficiency and a plethora of devices, it is difficult to develop

a general business model. Moreover, cross-media publishing products differ from cross-media broadcast productions in scale and exploitation opportunities.

Yet, one of the first principles of cross-media should be kept in mind. As a cross-media project is seen as *the use of content over several devices supporting a central theme* the cross-media exploitation should take this into account by differentiating revenues according to the devices. An example of this was given by Damien Marchi in an article on the cross-media television show *Star Academy 2* in France (Marchi 2002) In the article he stated that revenues were differentiated according to the devices, media types, and frequency and not according to content. The content was spread over various devices:

Table 1. Content and devices (Source: Marchi 2002)

Content	Devices	Media type	Frequency	Price
News	Web	Text+image+ video	18 times a day	Free
	SMS	Short text	6 times a day	€ 0.35 per message
	Interactive Voice Response	Audio transcription	3 times a day	€ 0.34 per minute
	i-Mode	Text+image	18 times a day	Free (except cost of download, charged € 0.01 per kb)
Live Feed	Web	Stamp format, not full screen	24/7	€ 0.56 per 15 minutes or € 15 subscription for the period of the programme
	CableTV	Regular TV quality	24/7	€ 12 for the period of the programme
Summary	TV	Analogue TV	1 hour a day	Free

Of course, this method of pricing has something to do with the maturity of the business models of these devices: everyone is willing to pay for cable TV or for sending an SMS, but will not automatically pay for accessing content on the web. In order to attract users and to easily promote these devices in an independent way, every device must display a special piece of content or service, which is not accessible on the other devices. And it will have to be real content, different from the one accessible for free. Still the integrity of the whole system should not be forgotten as it is through the web that most users will access content; besides it is a good way to extend the TV show's brand value.

Besides gaining revenues from the consumers, the cross-media producers were able to attract more sponsors. They also were able to attract some carriers and providers, who wanted to buy content exclusively or wanted to syndicate content from the show for their subscribers.

As can be seen from the frequency, this cross-media production was on a 24/7 basis with some devices being available a few times during the day. No specific scheduling of messages or broadcasts during the day, so-called day parting, has been sought after in this project. Yet six messages were sent during the day, when people were supposed to be at work or away from the TV or PC.

Day parting can be applied in business environments, too. Users of a business service such as the *Wall Street Journal* can indicate in their personal profile when they are home, in the office or in between. In this way, they can use the Internet on their portable computer at home, on their smart phone and through push media. By planning the use of various media at various moments in time, cross-media support the full service concept.

6 Marketing and Cross-Media

Cross-media projects are hard to promote. So far, only few lessons have been learned from cross-media projects. Damien Marchi, who was involved in the second season of *Big Brother* in France, dubbed *Loft Story*, formulated eight commandments (Marchi 2002).

1. Give users access to exclusive content not seen on television.
   During a TV or movie production usually more material is shot than can be shown. Users like this unused content exclusively, for example on the Internet through a club membership.

2. Interact with the show – Give the power to the audience.
Involve the audience by having them vote, ask questions, and by polling them.

3. Make the show even more known.
Use the other media besides television to keep the users in touch with the show.

4. Increase users' loyalty.
Loyalty of fans can be stimulated by a fan club and viral games.

5. Recreate the atmosphere.
Levy the atmosphere of the TV show to another medium.

6. Continue the show on the web.
Use the TV show to drive the other devices.

7. Enhance the watching experience.
Stimulate simultaneous use of media (browse the Internet when watching TV for example).

8. Use multiple devices.
A multi-device system built around a TV show allows channels to increase the number of revenue streams.

But cross-media is more than only increasing the number of viewers. Having a cross-media system around a television programme goes beyond the simple fact of increasing the TV audience. The broadcaster wants to extend its brand to the largest number of platforms possible, starting with the brand of its famous programme.

With the development of cross-media formats we see already the way that television will change: the broadcasted television programme becomes one of the elements of the branding system. More and more programmes are created where the cross-media format is not *adapted* to the show but where the distribution through multiple platforms *is* the most important part of the programme. This can be illustrated with Big Brother/Loft Story. The show offers the audience the illusion that the contestants in the house can be followed on a 24/7 basis; this is what makes the show popular. Yet the only place where it is actually possible for anyone to watch the contestants at any time is on the website (or on the special TV channel) and definitely not during the TV show that only shows highlights of the life in the house. If you look at it this way, the TV show becomes a *promotion* show for the website or other interactive platforms.

7 Is There a Future for Cross-Media?

As stated in the introduction cross-media is not an unequivocal term. In the section on technology it has been made clear that cross-media is not linked to a particular technology platform. The question can even be posed whether cross-media will have a future.

Koopee Hiltunen (2004) of the Finnish cross-media company Haukion presents the thesis that intuitively many people know what the term means. In fact cross-media is hardly made explicit as a term. Cross-media is part of the media universe; it has become the default mode of making media. Users will be so accustomed to cross-media that they do not notice its presence, but they will notice its absence.

For professionals cross-media will place a burden on their skills. They will need a broad understanding of the whole media universe. Project management skills will become highly valued. Ideas will be valued greatly. Design (visual, structural, narrative, usability) will be the greatest challenges in cross-media productions.

Looking at the industry Koopee Hiltunen predicts that marketing communications and games will be the driving forces behind cross-media. There will be a small number of original cross-media formats, which will be copied in great numbers. He anticipates that small players have to co-operate in order to survive; big companies have more possibilities. It is even possible that there will be super developers, who can control the whole content production chain.

The critical notes of Koopee Hiltunen are counterbalanced by an optimism that lives within the European Union. Participants in the EC funded project MGAIN see the combination of mobile and cross-media as a new content generator for Europe. Technology is no longer an obstacle "in offering content to users in preferred media and rich-media formats, and the content can be personalised" (MGAIN 2004). In MGAIN, entertainment, entertaining communication, advertisements, education, and information delivery are areas where heavy growth is predicted.

Also at the IST Conference 2003 in Milan cross-media entertainment was seen "as the main driver for the future Information Society, providing a much richer experience than currently gained from pictures, voice and data on television, the Internet or third-generation handsets" (EC 2003).[1]

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[1] The author likes to thank Damien Marchi for his comments and additions.

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