A BRIGHTER PICTURE

Enhancing consumer choice and audiovisual creativity in the broadband era

A statement on the promises and challenges of digital broadband technology

By the

International Federation of Film Producers Associations

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Audiovisual producers have embraced the digital broadband era enthusiastically.

Their vision for the future has the consumer calling the shots to an extent never envisaged before in the history of filmed entertainment: enhanced sound and picture quality, combined with instant high-speed access to films and other content will allow users to be their own programmers, delving in an almost limitless inventory of titles from a diversity of sources. Producers share this vision with the electronics manufacturers and the IT sector.

Audiovisual producers are calling for technologies that can both help enhance consumer choice and protect the economic dynamics that sustain audiovisual creative endeavour.

The two objectives are entirely inter-dependent: in order to enjoy limitless choice of high quality entertainment anytime, anywhere, on any device, the consumer needs secure technology solutions that restrict illegal copying and unauthorised re-distribution.

Producers also see both objectives as realistic and deliverable: the consumer electronics and information technology industries are able to incorporate copy-protection solutions in their products without compromising legitimate consumer expectations for easier, more flexible access to movies and other content. Indeed, such solutions increase consumer choice (the DVD is a prime example).

The solutions exist today and their integration into the digital broadband universe need not make access to the technology complicated or prohibitive for the consumer.

FIAPF, the International Federation of Film Producers Associations, represents producers organisations from throughout the world. Its members make films and audiovisual programming in 25 countries, from India, China and Japan to the Americas and the majority of European countries.
Like all the other stakeholders in the broadband economy, FIAPF wants the consumer to enjoy a rich menu of content anytime, anywhere, at a low price.

The demands of worldwide producers are guided by this positive vision of a future in which the consumer drives demand and can delve with unprecedented ease into a vast inventory of entertainment product.

These demands are both limited and realistic: we are not asking for the technology industries to bear the full brunt of prevention of illegal copying. We are merely saying that they can work collaboratively with the production sector to implement cost-effective and efficient copy-control solutions and thus make a powerful contribution to bringing down piracy to manageable levels.

We accept that no single solution will ever be entirely fail-safe but an array of combined technological measures can go a long way towards allowing legitimate users to enjoy all the extraordinary advantages of broadband, whilst substantially discouraging dishonest users and professional hackers.

This outcome is vital to the future of audiovisual creativity. A feature film or TV programme demands considerable skills and substantial risk investment, with no guarantee of economic returns. By helping to preserve the capacity of the content producers to generate revenue from the legitimate sale and rental of content, all broadband stakeholders stand to benefit.

Conversely, the skills, talent and investments will dry out unless the risk of widespread non-authorised copying and organised piracy is addressed through every available tool, including technology.

The fight against illegal copying and distribution is a multi-layered one. Amongst others, it demands

- appropriate copyright legislation
- robust enforcement measures
- sustained public education
- new business models able to attract consumers with competitive prices
- FIAPF is present in nearly every one of these layers.

FIAPF believes technology has a decisive role to play in winning the fight for the worldwide containment of piracy.
The policy objectives that will make broadband a success

1. Educating the consumer: The lynchpin of any positive effort to contain illegal copying is education about copyright and the use of technology. Public authorities should devise information and awareness campaigns about the importance of copyright and the detriment caused by illegal copying and distribution of content. They should implement those with support from rights holders and content producers’ organisations;

2. Delivering open standards: open industry standards need to be developed, supported and implemented by all – these will help marry security/rights management with the requisite standards of flexibility and interoperability;

3. Creating an interoperable environment: Collaboration must continue between all stakeholders in the new audiovisual economy to ensure devices can safely and easily interact with each other;

4. Making the PC the secure entertainment platform of the future: Technology companies should collaborate fully with the process of making broadband internet and digital content transactions safe – they should in particular implement hardware-based security solutions within the PC to enhance and complement software-based entertainment applications;

5. Closing the gaps in the digital content protection: Secure technologies are needed to deal with: 1) the protection of unencrypted digital television broadcast signals from unauthorized redistribution and 2) plugging the “Analogue Hole”. These solutions should be developed and supported by CE and IT companies acting in cooperation with the entertainment industries;

6. Defining and implementing the highest standards for Digital cinema: Only through the most enhanced quality experience will the consumer be persuaded to continue to come to the film theatre after the transition from 35 mm print to digital imaging is completed. Lower quality high definition television standards may usefully be adopted for non-feature film content;
FIAPF TECHNOLOGY STATEMENT

Background

ENHANCING CONSUMER CHOICE THROUGH SECURE TECHNOLOGIES

1.1 Broadband digital can only succeed if content can travel securely

Digital technology improves spectacularly the functionality of all media platforms, speeding and widening access to content and enabling a more flexible, individually programmable, pattern of consuming entertainment.

Broadband technology also challenges the audiovisual industries to adapt their business models and develop innovative ways of meeting the new range of consumer expectations.

In the drive to achieve this technology-enabled world, the protection of the economic and creative engines of content production must be a foremost consideration for all stakeholders, from consumers to manufacturers, from producers to Government and international institutions.

The specific nature of digital technology has to be taken into account in order for the technology to contribute to economic growth and cultural diversity, rather than undermining both:

1. broadband internet is the biggest, most far-reaching and most democratic information and communication system ever invented;

2. digital images and sounds are so sharp as to permit pristine rendition of a content – circulation through digital networks and the making of physical copies do not result in any detectable loss of quality;

3. When these two attributes are combined in a non-secure configuration, the vision of a world in which content moves from player to player at the push of a button, turns into an anarchy of wholesale unlicensed copying, unauthorised distribution and organised piracy.

FIAPF sees the need for technology-based security solutions as an integral and indispensable part of making digital broadband a reality for the hundreds of millions of potential users worldwide.
Whilst we believe in protecting content at the source, we also regard this tier of solutions as being insufficient on its own. It is vital for the future of our business that software-driven protection devices be complemented with hardware-based security.

The struggle against unauthorised use is necessarily multi-layered: it calls on strong copyright legislation, robust enforcement, a critical mass of litigation cases, widespread education and the strategic use of technology. It is only by attacking the problem from all ends at once that piracy and illegal uses will eventually be containable to levels that will not disable the creative content industries to the extent that they would cease to exist.

Technology must play its part fully.

In the pages that follow, we describe how technology can deliver a secure environment for the enjoyment of content by consumers.
1.2 FIAPF’s demands for technology solutions are not incompatible with legitimate consumers’ expectations.

Digital technology should be first and foremost an instrument for delivering improved consumer choice and flexibility of use. In this context, basic expectations must be met.

National laws in most countries provide for fair use provisions or list specific exceptions to intellectual property rights. These provisions guarantee that consumers can make copies for their own home use and watch the content at a time chosen by them. This includes the possibility for the copy to be shown to others in the non-public sphere and providing no commercial revenue is derived from such use. These regimes also allow content to be excerpted or quoted for the purpose of academic or scientific research, tribute, parody, etc.

The content protection technological solutions FIAPF and its members want the Consumer Electronics and IT sectors to develop and implement with them, will not eradicate private copy and other exceptions and/or applications of the fair use doctrine.

The sophisticated content protection and copy management options enabled by the new technologies will not amount to a restrictive copy prevention system. In fact, within authorised domains to be defined through international standards such as DVB (Digital Video Broadcasting), consumers will be able to make private copies of films, taking full advantage of the flexibility of use enabled by the technology. Whilst these solutions may not always obviate the need for private copy levies, introducing or maintaining such levies should remain subject to the application or non-application of technical protection measures.

Other consumer concerns include the important issue of preserving privacy. It is suggested that data streams would be more prone to inappropriate manipulation or scrutiny in a broadband digital environment than ever was the case in the analogue world. FIAPF treats these issues seriously. Consumers’ concerns with preserving the confidentiality of private data mirrors their own concerns with seeing content widely distributed without prior authorisation.

Just as copyright law must apply in the digital environment, so must the relevant data protection rules be respected.
Dealing with the security gaps

2.1 Securing a bright future for the PC

FIAPF’s is very concerned by the current security shortcomings of the personal computer as a broadband digital platform for audiovisual content.

According to a US research firm, computer sales reached over one billion units sometime in 2002. Historically, the overwhelming majority of this staggering number of sales have been over the past fifteen years and, therefore, mostly PCs and laptops. However, sales of PCs have begun to plateau. New applications are needed to revive sales: Consumers are staying away, waiting for the next exciting generation before coming back to the hardware store.

FIAPF believes the PC has the potential to become the multi-functional media and entertainment server of the future. However, for this desirable development to take place, it is essential that the piece of hardware that came to define and symbolise our times be made more secure as a platform for all forms of audiovisual content.

Making the PC secure involves a complex architecture of often inter-dependent technological solutions.

Some of these are network-based; they rely on appointed trust authorities to oversee the transaction of encrypted content across the networks, communicate with key management systems and monitor the licensing and distribution. Others are software-based, relying on tamper-resistant software programmes aimed at preventing unlawful copying and dissemination of content.

For this complex architecture to be complete and fully integrated, there is an urgent need for the IT companies to consider incorporating hardware-based security solutions within the PC itself. Some of these solutions have been in development for some time and are ready for implementation. They include built-in security co-processors, PKI tokens, and a hardware-based root of trust.

The security technology exists and is ready to be incorporated into the PC, readying it to become all that the consumer might expect of a flexible, multi-functional and secure platform. A secure PC platform has many benefits for consumers, including secure e-commerce, e-mail, and the ability to fend off viruses and hacks that can jeopardise the privacy of personal data.

FIAPF believes that hardware-based security-in-PC solutions are;

- **compatible with making machines at competitive unit costs** – the economics of computing are in an ongoing mutation: fast decreasing costs are
making it easier for manufacturers to incorporate advanced PC-security features and wider connectivity in PCs and portable devices. Moore’s law continues to drive the sector;

- **compatible with fostering innovation** – adequate content protection sends the right signals to investors. This translates into sustained investment in new content which itself drives consumer demand for more functionality and flexibility of use in mass market electronic devices. Content is the driver of this entire economy;

- **compatible with consumer expectations** - of access deliverable through broadband technology and ‘intelligent’ electronic appliances, through a pre-defined ‘authorised domain’. Content piracy can be prevented without detriment to the legitimate expectations of honest consumers;

- **compatible with fair use/exceptions to copyright** - copy control technological measures are not antagonistic to consumer choice. They merely regulate content use to ensure that use occur in conformity with licensing – they permit the accommodation of exceptions that serve the needs of legitimate users, but prevent abuse;

To recap, FIAPF believes PC security solutions will benefit all:

- **consumers can look forward to greater flexibility and interoperability** – Once satisfied that content can be managed securely in the cyber-chain, audiovisual producers are enthusiastic about new business models meeting consumers’ demand;

- **ISPs can look forward to improved network performance** – the mass of traffic generated by illegal peer-to-peer file swapping is clogging the broadband arteries and slowing down download performance. ISPs have a stake in creating a more secure environment as more regulated traffic will enhance network performance. It will provide increasing incentives for content owners to expand legitimate Internet Protocol (IP) based content delivery services;

- **Manufacturers can look forward to PC sales’ growth** – according to Microsoft Chairman Bill Gates, in the second millennium, advanced PC functions will be incorporated in the most mundane of domestic devices, bringing data, information and entertainment through a vast diversity of players. Secure delivery of legitimate content will undoubtedly drive this development;

### 2.2 Making digital signals secure

With the advent of digital television, a very substantial problem has arisen. It occurs at the point where a protected digital signal is converted from its original form to an unprotected analogue signal to go through a TV set still based on analogue
technology (‘legacy’ devices). Since analogue sets are still present in the majority of consumer households, the problem is of great magnitude and will continue to be for some time.

Encrypted digital content can lose its usage rights information when it is decrypted and converted into an analogue signal. If, from that point, it is reconverted back to a digital signal for recording by a digital device, such as a PC, the content will be digitally recorded in-the-clear, allowing it to be easily disseminated (through broadband internet) without the protection of encryption.

This problem can be solved through legislation that mandates that usage rights information be carried through the analogue signal and that this rights’ information is detected by all devices with analogue-to-digital video converters in order to trigger downstream protection of the content.

Additionally, a problem continues to exist within the digital universe, over the capacity for users to receive, record, and disseminate unencrypted digital television broadcast programmes over the internet.

FIAPF believes technology solutions such as watermarking (metadata embedded in the content at source) and/or a simple marker known as the ‘Broadcast flag’, can be used to signal downstream protection of a digital television broadcast content from unauthorised redistribution over the internet.

Again, the cooperation of the broadcasting, consumer electronics, and IT sectors is a necessity in order to define and implement realistic security solutions in this important segment of the digital broadcasting market.
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