

DigiTraining Plus: New Technologies for European Cinemas

Kuurne, Belgium

28 March – 1st April 2007: Lecture 29.3. 9, 00-9, 30

What can digital cinema offer Art-house-theatres?

Requirements, opportunities and perspectives

Welcome/Greeting

Good morning ladies and gentlemen. First I want to thank Elisabetta Brunella for the invitation and the possibility to present our view.

Before I come to our subject, I would like to say a few words about our association: Who is the AG Kino Gilde?

The AG Kino Gilde is the German Art-house Association. Out of a total of 4,900 screens there are 575 Art-house screens in Germany. 520 of these are members of the AG Kino Gilde.

What can digital cinema offer Art-house-theatres?

Presently 178 movie theatres in Germany are equipped with digital projectors and 53 of these are located in Art-house-theatres. Most of these are 1.3K projectors, largely installed in the course of EDZ 2005, some others through financial sponsorship provided by the advertising companies. The rest are 2K projectors.

How will the landscape of movie-theatres – especially the segment of Art-house-theatres – change once digital projection-technology is introduced on a grand scale. I don't question that there will be a great rollout, but the issue is when it will actually happen.

My point of view is based on the following five issues:

- 1) Personal and practical everyday experience with DP.
- 2) What requirements do we have of DP?
- 3) What opportunities does digital projection-technology offer theatre managers?
- 4) How will the market of the Art-house-theatres change?
- 5) Remaining questions and time frame.

1. Recently there has been a dramatic increase in the digital production of movies, especially of art and children's movies. I would like to give you a brief overview of the principal problems resulting from screening digital films.

First an experience from our theatre in Bayreuth: (Bayreuth is a middle-sized town with a population of 75,000 people)

Ten days ago we showed a digital children's film. The data was delivered to our theatre on a hard drive from which it was read into the server. The problem was that the server was unable either to recognize the data or read it. The Server Provider was contacted. An essential update was installed – a process which took several hours. During that time we had to ask ourselves why we hadn't received the update earlier.

On our next attempt to download the data it turned out that the hard drive delivered didn't contain any convertible data. Finally, on Sunday morning a new hard drive with new data arrived. In the meantime we were completely unsure whether it would be at all possible to show the screening, for which about thirty kids had already reserved seats. On Sunday at 12.30 we finally got the go ahead – just one hour before the screening. This event – which was by no means unique – cost our technicians about 20 hours overtime as well as two additional trips to the theatre at the weekend.

Another example of a colleague who runs a cinema with three theatres in a big German city. They are equipped with two different types of projectors and 2 incompatible servers. This was necessary because both, EDZ and the other provider, insisted on implementing their own systems. There he is screening up to six to ten digital films per week. He tells the following story:

*

Since the two server systems are not compatible, some films have to be requested in two different encryptions. On occasions they are being screened in different theatres – one in the afternoon, which is one different from the one featuring the main evening events.

As you know, this flexibility is essential for movie theatres, especially for those that offer a great variety of programming.

*

When problems do occur, data-supplier and server-supplier tend to blame each other. Theatre managers are suddenly expected to be able to judge complicated facts they are not qualified to evaluate. Sometimes such issues keep staff on edge for days.

The technology is simply not fully developed yet. Faulty data or problems with screening the movies are almost regular occurrences. A movie must be completely screened in advance in order to check for problems, something that can even happen at the last minute. This means that currently the new technology requires more work than the 35mm copies.

Previously all 35mm films were assembled on Thursday mornings, regardless of when they were shown. With DP however it is crucial to allow for sufficient time to deal with any problems your digital copy may present you with, including the supply of a replacement copy.

*

As the distributors and the technical support services don't know yet what digitalization of movie-theatres means. Consequently copies and/or keys are sometimes mailed out much too late.

We may conclude the following:

Presently the new technology is more work-intensive than the 35mm technology.

The distributing companies claim that digital copies are just as expensive as 35mm copies. This is definitely untenable. Cost caused by digital projection doesn't only include the financing of investments but also greater expenses for personnel.

*

The quality of many digital movies still leaves a great deal to be desired, though altogether it has improved.

*

Unfortunately distributors frequently don't know through which provider their digitally-produced movies are going to be screened.

*

The point is even reached where the hard-drive of a server is full and films need to be deleted. It is of course just then that a teacher from one of our local schools would like to view with his class the very movie which has just been deleted (which is a good example of Murphy's Law)

*

As you know, one main advantage of DP is the low cost of a digital copy. So, when films are released with few 35mm copies, there is now less pressure, if a digital copy is produced as well.

"We feed the world" is a good example of having been able to run the movie for a long time – certainly longer than would have been possible with a 35mm copy.

*

Another clear advantage is the decrease in noise-level and associated strain for presenters.

Requirements,

On 2) What Requirements do we have of DP?

From our observations of our own digital showings and from our colleagues' feedback we have developed an agenda of Requirements for DP. It specifies the necessary technical criteria without which it is impossible to ensure smooth operation and appropriate quality, as measured by the standards of the 35mm technology.

There are 8 issues to be mentioned:

1. Picture Quality

As a general rule the quality of digital screening must not be worse than 35mm screening. This means:

- a) The implementation of the 2K standard seems inevitable. This makes sense to big screens; for small screens however a 1,300 Pixel provision is sufficient. This option should be part of any future European standard.
- b) Great color resolution and perfect contrast.
- c) Brightness proportional to the screen size.

2. Sound Quality

- a) A high quality of sound is vital. The standard of Dolby Digital Systems should be applied as a minimum.
- b) At least Dolby and DTS decoding must be possible.

3. Reliability of Digital Screening Technology

- a) What we need is the guarantee of uninterrupted service
- b) A swift resumption of service after a power-cut must also be possible (or after switching off the equipment – for example due to a fire alarm). A continuation of the screening from the point of interruption must be possible.

4. Safety and Data Transmission

- a. Data transmissions from external suppliers must be organized reliably.
- b. All picture and sound data must be encoded securely and decoding should - as far as possible – take place **within** the projector. That way the connection between player and projector can't be used as a source for pirate-copies.

5. Servicing and Handling

- a. All controlling and programming should be possible from any PC within the company's network. It is also desirable that all theatres should be controlled by **one** central server.
- b. Simple and straight forward operation of the equipment should be ensured
- c. The programming settings should be linked to the cash-register.
- d. Movie licenses must not be limited to single theatres. We as theatre managers need to be able to decide what theatre a movie should be shown in. Anything else would not only be impractical but also not make economic sense.

6. Infrastructure

- a) Components must be integrated through the existing control system. Since many existing systems don't have the capacity to operate both a classic and a digital projector, it makes sense to integrate a digital control system into the new technology.
- b) Furthermore a connection to the existing electrical, air and network infrastructure must be ensured.

7. Special Functions

- a. The inclusion of alternative content (for example commercials) into the architecture of the system must be possible.
- b. An inclusion of pictures to inform visitors (for instance in the case of disruption, interruption etc.) must be possible at short notice.
- c. The screening of special sources (DVD, HD-Television) must be possible as well.

8. Standards

The evolution of codes such as JPEG 2000 and MJPEG 2000 for pictures and sound has not stopped. The systems have to remain open for future encoding and encrypting processes, as well as for those of other distributors. Some of these requirements may appear trivial to you, but in my experience it is necessary to describe the perspective of theatre managers in detail, because otherwise there is a risk of it being neglected.

We'll have to continue to deal with the criteria that determine the newly evolving markets in the course of the (coming) digital Rollout.

These are the views held by our organization, the AG Kino Gilde:

1. We need an open system for all market participants – i.e. free access for national, European and international films to all theatres. It is essential to ensure programming variety in our cinemas.
2. There mustn't be a two-tier system – i.e. what are now being established as national (and perhaps European) norms must be valid for all divisions of theatres and of course for the Art-house division, too. Art-house cinemas present the best and most multifaceted program and as such must be equipped with the best technology.
3. Terms and conditions on which the films are made available must not deteriorate due to the installation procedures, packaging and mailing of data.
4. A universal conversion of movies to DP must **be fair and balanced for all market participants. The conversion must not be an instrument for thinning the market.**

(Side aspect: What challenges does the theatre manager have to face?)

The conversion to DP requires totally new competencies from technical personnel. Not only do DP technicians have to possess advanced operating skills, they also have to be able to identify errors and their causes. Here it is likely that we will see the development of a new profession.

Opportunities

On 3. What opportunities does DP-technology offer Arthouse-theatre managers?

The question of opportunities offered through DP is inseparable from the question of improved experiences for the moviegoer. Does DP offer added value or increased attraction?

If you compare DP in 2K and 35mm copy in technically new and mint condition, the answer is relatively clear:

Apart from a certain type of deep-black contrast we cannot really talk about a discernable difference in the field of 2K projection. Of course it's possible to play with colors in the area of animation, but basically pictures on a new, flawless 35mm copy that's projected by a strong projector can't be matched in terms of color spectrum, depth of color and contrast. Only with respect to the 4K and higher does DP prove to be qualitatively superior to the 35mm projection.

Since, at least in Germany, many moviegoers don't know how a movie gets onto the screen, and frequently even wonder if a film is brought to the theatre inside a film box, it might not be easy to present DP as a revolutionary innovation, which could justify an ever higher ticket price. It is clear; you won't appreciate what you can't experience with your senses.

Having said this – and this is what must be considered when discussing the financing – one shouldn't rely on additional revenue through DP.

With respect to the essential aspect of a general strengthening of the theatre segment vis-à-vis other market participants this means that digital cinema-technology won't offer anything other than short-term increases in attraction.

But there are opportunities in the field of 3-D, in the preprogramming, commercials, games and alternative content.

One might think of the transmission of TV shows, nowadays already partly available in HDTV – in particular sports and music. Interactive games are another conceivable way of increasing attractiveness. Furthermore, DP may be used in the context of lectures, conferences and business events. From personal experience I can confirm that such additional uses are realistic, even though limited. Besides, all of these, except 3-D applications, are already possible with a 1.3 projector!

On 4) How will the market of the Art-house-theatres change?

a) We have to consider distribution as potentially very problematic.

If DP can be introduced on a broad scale, instant availability of first-release copies will increase greatly. Here digitalization would act democratically and equalize existing distribution disadvantages.

This refers especially to cinemas in the thinly populated rural areas.

We all know that if a region no longer has a movie theatre, the young grow up without any experience of cinema at all. This lack of experience cannot be

corrected: A person who has never experienced “the movies” as a child usually doesn’t access them later! So in this case, the market could profit.

b) In big cities the issue is a different one. There we frequently have several multiplex theatres with a largely overlapping program. There also is a conceivable number of Art-house-theaters with a limited number of 35mm copies. This is where Art-house-theaters might profit. They would be able to offer more up-to-date movies more quickly – movies which until now have been brought to the market in a small number of copies only. In this way digitalization offers greater programming variety.

c) For productions with smaller budgets and for smaller distributors DP also promises advantages because reduced distribution costs allow a broader and better utilization. This could also benefit documentaries.

(A Side Aspect for Producers: The subsequent steps of vertical utilization, such as merchandizing, DVD, VOD, TV, etc. could be better exploited, since through broader evaluation a higher degree of information and utilization might be achieved).

Can new target groups be reached?

As laid out above, it seems unlikely that through DP itself new target groups for theatres will be reached. It’s conceivable that the existing target groups may be broadened because of the broader basis of distribution within the scope of the increased spread of DP. This could also cause improved programming for already existing target groups.

But it cannot be ruled out that theatres as a whole will suffer losses. For example, if the producers decide to narrow the windows between the subsequent steps of vertical utilization, the uniqueness of the cinema is in question and danger. If content is available on all levels at the same time, it would be a very big challenge for the whole cinema industry.

On 5.) Other Remaining questions and timeframe

While we do expect a greater “digital Roll out”, we do not expect it this year. There simply are still too many unanswered questions on too many levels.

Subject business model:

The basic issue of the movie distributors’ and theatres’ business model has yet not been considered. There are thoughts about the so-called VPF as well as other models. These have not really been thought through yet. Such a business model is, however, the basis for any further considerations since it will ultimately influence the decisions of theatre managers.

Profitability of investment

The German movie industry has undergone an incredible process of modernization within the past 15 years.

This process of modernization has largely taken place in the newly established multiplex cinemas. The Art-house sector has invested as well – in part intensively - in technology and equipment and some new constructions.

Who will pay for the investment?

As the beneficiaries are clearly the distributors, a cost-neutral investment is needed for cinemas to shift to DP.

The profitability of investment is determined by the life-span of the different parts of the technical equipment.

It is to be assumed that some key parts, such as the projector will not last any longer than 3-5 years. A business model has to take into account this aspect as well as the higher running expenses.

How will the film-copying industry react?

A further question addresses the reaction of the film-copying industry. At the moment a 35mm copy costs between 650 and 1,500 euro. How will the film-copying industry react under the possible pressure of fewer orders? What price reductions are likely and how does this affect expenses and savings as a whole?

As you see: Many questions are left open!

What timeframe is conceivable for the rollout?

The Fraunhofer Institute, which is the technical partner for the implementation of the DCI- recommendation of applicable norms, will present the first DCI test film at the German convention of movie-theatres in Baden Baden next month.

At the same time the results of a PWC profitability study will be presented, which might be the starting point for the development of a financing model and for negotiations between the contracting partners.

(As of today the position of the big American distributing companies is to be considered as "wait and see". This should change once the parent studios have made up their minds).

If we succeed in solving the multiple technical, logistic and safety issues swiftly, the year 2008 could mark the beginning of the digital rollout.

Yet a digital rollout is limited by the producers' capacity. It will take more than a few years to equip all theatres. In any case it seems realistic to assume many years of dual screening (35mm and digital).

This aspect will reduce savings for distributors, which will have a negative influence on the profitability and attractiveness of the entire plan.

For the rollout the following two scenarios are conceivable:

- 1) A major rollout plan, that takes several years, yet takes as many theatres along as possible.
- 2) A rollout that will only cater for the 40-60% of theatres that are of main interest to producers and distributors.

At the moment in Germany the chances are that the first scenario will be more probable than the second.

Yet one can't of course be sure that one of the big theatre franchising companies won't break out of established common practice because it might expect advantages from independence. However, limits to this are set by the thin spread of capital of the big franchising theatre companies.

So, to round up my talk, I can conclude that:

the subject remains exciting and keeps us in a state of uncertainty.

Thank you for your attention!