

VIEWING:SESSIONS 2006

SEMINAR - Saturday, April 1, 2006 2.30pm / Glór Irish Music Centre

Neil Connolly, Director of Light House Cinema ; Kevin Cummins, Director of Operations of DigitalDigital Cinema Ltd. ; Edward Fletcher, Managing Director of Soda Pictures and Peter Walsh, cinemas manager with The Irish Film Institute examined key issues relating to digital cinema technology in this seminar.

NEIL CONNOLLY: Good afternoon everybody. Let me start by introducing the panel. Our names are listed alphabetically on the screen behind me and by coincidence, this is the order in which we're going to speak: I'm Neil Connolly and I'm here mostly to facilitate the session. Kevin Cummins is the Director of Operations of Digital Cinema Limited, an Irish company, based in Thurles, Co Tipperary; Edward Fletcher is Managing Director of Soda Pictures, an independent distribution company based in London, and Peter Walsh is Cinemas Manager at the Irish Film Institute in Dublin.

Each of the panellists will talk for ten minutes or so and at the end you can ask questions – but if there's anything you want to ask during any of the presentations, feel free to interrupt any of us.

There are lots of burning questions out there right now about digital cinema and by way of introduction, I'll try to highlight some of them in a way that, hopefully, will provide some perspective and context for the presentations from the rest of the panel.

First of all, let's try to be clear about what it is we're here to discuss this afternoon and about what we mean when we talk about digital cinema – or d-cinema. D-cinema promises a future in which digital technology and equipment will eventually completely replace the 35mm projection systems we use in cinemas today.

What's already happening worldwide – and this includes here in Ireland, right now – is that digital projection systems are being installed in cinemas on a phased basis, initially to be used in addition to the existing 35mm equipment which in the short to medium term we'll continue to use while digital roll out progresses. But in the longer term, in 10 years or a bit more perhaps – forecasts keep changing – we can anticipate complete replacement of celluloid and 35mm analogue equipment with end-to-end digital cinema – using digital technology and formats all the way from shooting stage, right

through post production, into distribution, and finally for presentation in cinemas.

But why replace film at all, you might ask? Who wants to do this?

The demand certainly isn't coming from audiences. Or from the exhibitors who operate the cinemas. The digital revolution – or more accurately perhaps, evolution – seems to be largely driven by growth strategies devised by technology corporations and Hollywood studios.

But the arguments about why d-cinema makes sense have been fairly well rehearsed at this stage. They include its potential to deliver reduced print costs and increased speed of distribution as well as its capacity to support greater scheduling flexibility – it'll be much easier to match supply more effectively to demand. For example, the lower cost of digital copies will mean there'll be fewer constraints on availability and also the usual need to return the print or move it on to another venue will disappear so we'll be able to, say, screen a film once a week for 10 weeks instead of 4 times a day for only 2 weeks.

And in theory projection quality in cinemas will improve because digital copies don't get scratched, they don't pick up dust and so on, no matter how many times they're screened.

The biggest question – and it's one that has yet to be convincingly resolved – is who's going to pay for this proposed conversion to d-cinema?

Can we expect audiences to pay a premium to go to digital screenings? Some leading equipment suppliers to European cinemas are claiming that early adopters of digital technology are recovering their outlay on equipment by raising ticket prices. Personally, I remain unconvinced that the attraction of digital screenings in themselves – early novelty value notwithstanding –

justifies higher ticket prices, particularly in the independent, art house sector.

Exhibitors have been making it very clear that they certainly don't want to be saddled with the burden of the cost of conversions that will mostly benefit producers and distributors – in spite of claims being made about the potential to develop new audiences and additional revenue streams – for example by screening live sports events and concerts that could be beamed into cinemas from satellites.

And finally, distributors? – Perhaps Ed Fletcher will tell us later how keen Soda Pictures is to pay.

EDWARD FLETCHER: I don't want to pay either. (audience laughter)

NEIL CONNOLLY: So, what are the key agents of change then? What's actually been propelling digital cinema rollout to date?

I'll focus on just three things that could be characterised as key catalysts: these are: emerging business models; the publications of Hollywood's DCI specifications and, closer to home, the UK Film Council's Digital Screen Network.

Regarding the first, as a response to the challenge of who pays for conversion, differing business models are emerging which have been encouraging and supporting the spread of d-cinema installations. As a very relevant example of one, Kevin Cummins is here to present his blueprint for digital deployment in Ireland. His company, Digital Cinema Limited, is acting as a financing intermediary between distributors and exhibitors and he plans to install DCI compliant digital cinema systems in every cinema in Ireland – at no cost, or at least relatively little cost, to cinema owners here.

What do we mean by DCI compliant? DCI – Digital Cinema Initiatives – is a consortium of major Hollywood studios; I think there were seven involved initially. The publication in July last year of DCI's Digital Cinema System Specifications has been heralded as a tipping point for a global rollout of digital cinema. If you're interested you can download the 162 page document of very detailed technical specifications from DCI's website at www.dcinovies.com.

DCI's aim is to establish extremely high quality standards and equally importantly to achieve global compatibility,

so that digital content can be distributed and played anywhere in the world – just like what's done today with 35mm prints.

A key development a bit closer to home is the rollout of the UK Film Council's Digital Screen Network. For anybody working in the independent, specialised sector in these islands, this is a hugely significant development and there will obviously be significant knock-on effects for Ireland which, for distribution purposes, is mostly a sub-territory of the UK.

The DSN, of course, is government funded, and I probably should have headlined the fundamental catalyst for change here as government intervention. Anyway, the creation of the DSN is part of the UK Film Council's strategy to encourage wider distribution and exhibition of "specialised films". In theory, the cost of 35mm prints discourages wider distribution and exhibition of specialised product and d-cinema, as an alternative delivery medium, offers a solution – it promises to be cheaper, quicker, more flexible, and so on.

The plan is, by the end of this year or early next year there'll be a network of 240 screens in about 200 cinemas in place. Not all of the screens are in independent specialised cinemas by any means. Many of them are in multiplexes. The deployment is being managed by Arts Alliance Digital – a company to watch – and it is very much on target. Arts Alliance said they would have 50 installations completed by Spring this year and they've already exceeded this target.

Finally on this, a start has already been made in distributing digital copies on the existing screens in the network and I hope Ed Fletcher will be able to tell us more about his experience in this regard later.

To backtrack just a little before I finish, I have time to make one important point, which is that there isn't total agreement about a global need to meet DCI's Digital System Specifications. There are many early adopters of digital technology out there already and compromises have been made along the way for lots of reasons. There are clear tensions between different goals – for example, there's a network of digital installations across Europe designed to support the distribution of documentaries, where audience access is the goal rather than security of content – a position that is a polar opposite to Hollywood's. Equally, lower quality – a function of lower cost – has been regarded as acceptable by many early

adopters. We may be able to get into more discussion about this later but for now we can think in terms of the distinction between e-cinema or electronic cinema and d-cinema as essentially one of quality and we can characterise e-cinema for discussion purposes later as any digital system that falls short of DCI specifications.

In crude terms, the point is that there's no law, yet anyway, that says that DCI standards for d-cinema must be treated as absolutes: if you don't want to screen Hollywood blockbusters on giant screens, then e-cinema with lower, but acceptable standards for particular circumstances, could be a viable option.

Nonetheless, although compliance with DCI's system specifications is voluntary, in the absence of any other international industry norms, equipment manufacturers, who are all keen to secure a foothold in a rapidly developing market, can't afford to ignore them. So, DCI's system specifications have in effect become a de facto industry bible.

One of DCI's key objectives is to achieve global compatibility and if everybody – equipment manufacturers, software developers and system installers – adheres to DCI specifications and becomes DCI compliant, there will be complete compatibility and complete interoperability across all digital systems.

Digital Cinema Limited in Ireland and Arts Alliance Digital in the UK are both committed to making their systems DCI compliant. So, in theory, at some time in the future, Ed Fletcher will be able to distribute a digital copy produced in the UK by Arts Alliance Digital on Digital Cinema Limited's Irish screens – subject of course to making a deal with Kevin Cummins. Which makes this an appropriate moment for me to finish and hand over to Kevin .

KEVIN CUMMINS: Good afternoon, my name is Kevin Cummins and I'm the Director of Operations for Digital Cinema Limited, which is setting up the digital network here in Ireland.

The six Ws: *Who? Why? What? Where? When? and How?*

Who? Digital Cinema Ltd.

Why? We're doing the digital cinema industry.

What? Digital cinema conversion.

Where? We're doing the whole of Ireland, North and South.

When? We began in June 2004, and we'll have every screen converted by March 2007.

The operation we've set up is called Digital Cinema Limited. Who we are: we are an Irish-owned company established in May 2004. We are the operating model for the rollout of digital cinema, and we are privately funded. We are not owned by anybody else, just by three private investors.

The movie industry established DCI which Neil has already covered. The distributors are the ones most likely to benefit from cost savings, but cannot take on the multi-million conversion all by themselves. Theatre owners had started to dip their toes in – around 2002/03, a number of theatre owners had started to buy their own digital cinema systems themselves. The average cost for a screen is about US\$100,000. If you're kitting out a ten-screen cinema complex that's US\$1 million. So you can see the costs that are involved. Theatre owners started to say, hold on, we're not getting the benefits of it. It's the distributors that are getting the main benefits of the cost savings. So the industry needed to establish a business model that the movie industry – distributors and theatre owners would be comfortable operating with.

The advertising industry actually forged ahead in about 2001/02. There are a number of advertising initiatives that have gone on in a number of cinemas in the UK and in Norway, Sweden and Denmark, where they've put in digital cinema projection systems to screen ads. But they are low-end quality projectors, and some of the advertising agencies like BMW and the very big players have said the quality is not acceptable to them. But the higher quality digital projectors now being installed will also play advertising so the benefits for theatre owners are following through.

There are 100,000 cinema screens worldwide. The motion picture film prints are individually distributed to each screen, and you have nearly €750 million spent annually on replication and shipping outside the US. It's about 11 billion inside the US. You're looking at a €2 billion distribution industry that is being converted from film print distribution to digital print distribution.

It's not going to happen overnight. It's going to take a number of years.

The advertising is a little bit different in that every screen has two advertising film reels that go over and back alternating every five days. That's how they handle it. Very cost inefficient. With the digital you have the motion picture studio and the advertising agency supplying their content in a digital format. It's encrypted in post-production and compressed. It's encrypted and security keys are generated for it and it can be distributed by satellite. That's where the major cost savings come in – when you distribute by satellite instead of overland. It's shown on a digital projection system that's installed at the theatre itself. I think we've already covered a few of the main benefits there. Reduced fulfilment costs, improved motion picture advertising trailer and system management, significant improvement in content security, and proven, more consistent picture quality.

[the following sections were supported by a PowerPoint presentation]

This is the digital cinema model itself. On this left hand side you have the mastering process. This happens at the post-production house, where the finished product of the movie, when it comes out of the digital editing system, is about 1.2 terabytes in size. If you tried to send that using your DSL line you'd be waiting for two and a half years for the file to get to you. So they need to encode and compress it, which brings it down to a size, currently using the 2k encryption model, of about 100 gigabytes. By satellite you can transfer 100 gigabytes in about four hours on a 28 megabit connection, which is pretty decent. Keys are generated separately, and the packaging is generated separately, so basically your sound, your picture, your special effects are all encoded, encrypted, broken up into small packets, sent off, and at the far side it's reassembled.

What we have established in Thurles, Co. Tipperary is our distribution hub. We have a studio movie storage, we've a key storage, we've a distribution management system, an online booking system for the distributor and for the theatre owner to view, and there's a fulfilment and transmission system which basically handles getting the content to the site. At the theatre itself there's a satellite dish, a film store central which is basically a storage box. It literally stores the movies. On average 21 movies would be used in a 7 day period, so that box has to be capable of storing 42 movies, because you need to be able to book the following week as well. You're looking at 42 by 100 gigabytes; that's about 4.2 terabytes. So it's a large storage box. There's a player and a projector for every

screen. The advantage of the system is that if a player falls down, the central store can automatically become a player itself, and can automatically fulfil the redundant capability.

The contentious issue at the moment is that there's an automatic logging system on it. Under the DCI specifications, that log must be issued to the distributor and to the theatre owner, which will give lists of times and dates of when the movie is played. Some people don't like that. I wonder why.

The main areas of concern: use of technology. Data management. Too much to manage. Format confusion. At the moment there are four different formats. You've a QuVis format, an MPEG format, an XTC format and a Doremi format. Using the DCI specification all these companies are now merging towards one format called MXF and JPEG 2000. They've set a target date of January 1st 2007 to have all the equipment manufacturers and equipment players to adhere to that standard. Which means that a movie that is made or encrypted anywhere in the world will play anywhere in the world, the same as a film print.

The aesthetics of it: does it look good? Do you want 4k or 2k? Is the quality any good? We did a test in Hollywood where we put *The Road to Perdition*, which is a fairly dark movie – half the screen was done with a 35mm print and the other half was done with a digital projection system. We had 200 producers in and we asked them which was the digital and which was the film. All of them picked the digital as the film. The psyche is that the best quality has to be the film. But there is still a big debate about quality and aesthetics going on. In a mass market the quality of the 2k is acceptable for the user. For the specialist market there is still a debate about whether a film print is better than a digital print.

4k is another debate that is coming down the road because Sony is now developing a 4k projector. Just so you understand the difference: 2k is 2000 pixels per square inch. 4k would be 4000 pixels per square inch. So you have a higher density of image in that square inch. If you took a DVD that you play a movie on that you play on your TV and put it up on a large screen you'd be able to see the black dots, because the DVD wouldn't have enough data compression in it to throw it up onto a large screen. That's the difference between a DVD, HDTV and your high-end SD for the cinema industry.

Security. The biggest debate about security was will digital cinema encourage piracy. The difference in the encryption procedures that we developed for the film industry is we use the same encryption policy as Wall Street and all the banks. It's a 1024-bit encryption procedure, and if criminals break that they'll be going after the banks, they won't be going after your cinema content. The other aspect of it that is built in is that every digital projector has its own watermarking capability built into it. So if someone does record a movie in a theatre illegally, when that's picked up somewhere in another market we can analyse that movie and know where and when it was recorded, so it will help trace the piracy that is taking place. Contrary to popular opinion, most piracy now happens at post-production houses, and not in the cinema. A small proportion is in the cinema. We did a test for Pixar where we put an encryption watermark on every PC in their building, which is about 2,500 PCs. An illegal copy came out and we were able to trace it back to the four PCs that it came from. So that type of technology is beginning to take place to try and combat the actual piracy.

Who pays? The exhibitors shouldn't, the distributors can't. We need to come up with a vehicle that people can find acceptable. Where? We're doing Ireland. How? We're implementing, managing, and supporting the deployment of digital cinema in Ireland. It is a digital cinema services company building a digital motion picture and advertising distribution network. The network monitoring centre is based in Thurles, Co Tipperary, which just happens to be my home town.

We have major concepts that we want to make sure of. No change to the current business rules. A theatre owner books a movie with a distributor; away you go and do it. We're not going to change that. No revenue sharing. We're not asking someone to pay a percentage of it or pay a cost. We're not asking anyone to abandon prints. Every system we're installing has been installed parallel to a 35mm projector. There's a digital projector going in beside it. It's at the distributor's discretion to participate and it's at the theatre owner's discretion to participate.

The integrator is independent. This is kind of important from the Monopolies Commission's point of view. We have had a number of discussions with them about the network that we're putting in, and we're basically describing it as a utility network that will allow anyone to put content onto it and will allow anyone to show content. We're not being restrictive, so the Monopolies Commission had no problem with the country-wide

utility network that we're installing. They compared it to the ESB network that is currently there. Anyone can supply electricity to it, and anyone can pull electricity from it. It's that type of business model that we are deploying.

Supply chain replacement is basically what we're doing. Instead of delivering a film print you're delivering a digital print. The studios, the distributors and the advertisers will be charged a fee for getting the content onto the system.

Over on the right hand side, the exhibitors get the custody of the equipment for free. They have no charge for getting the equipment in to them. They make all screening arrangements exactly like they do now, and exhibitor/distributor movie booking is the exact same way.

What Digital Cinema Limited does is make sure that what is below the line here is fully operational and supported. Any content can get onto the system, enabling digital mastering systems in Europe, and the mastering can be done at a low price, it's not an exorbitant price. To get a movie mastered is about \$5,000. That's to get it encoded, encrypted and capable of getting it on to the network.

Content screening. We're making sure we adhere to the Hollywood standards, DCI specifications, future proof, and the maintenance. We run a network management centre and we use a satellite distribution network to get the content out there.

That's what it looks like in a theatre: a downlink, a film store central and a number of players for every screen that you have.

Just to give you a little about the content preparation at post-production. You could have original format that comes in in digital. To get it put on to a digital master for cinema it still needs to go through a format correction and a colour correction process so that the colour quality comes out like what the producer wants on the cinema screen. If it is made in a film print process it has to go through a telecine conversion machine which then goes into the format correction and the colour correction process. It depends on the source of where the original movie comes from, whether it is a digital format or a film print format, there are different costs associated with it. This line goes between \$5,000 and \$7,500, depending on the length of the movie.

It's a parallel operation. We work parallel with the analogue system. We hook into the same sound systems so there's no additional cost associated with the sound. It's a simple three button control: pause, stop, play. It's very easy to use.

How it will work is that the digital cinema system makes no changes to the motion picture advertising booking process that exists today. Once a site is certified ready for digital cinema, the distributor determines after discussions with the theatre owner if they are going to send them a digital copy or a film print. The distributor delivers a digital print to DCL and an electronic distribution list, we send it off by satellite, and the theatre site receives either the digital print by satellite or via USB hard drive, which is the backup.

In Ireland this is what we are currently doing. These are the stages of the project: you've surveys, cabling, satellite, portholes, sound, servers, projectors, training and testing. 122 theatre sites, 641 screens. At \$100,000 a screen that's a \$64 million project.

Where we currently are: On the cinema site survey – there are 12 new sites being built in Ireland this year. There are 110 current sites, and there are 12 more being built this year, so you can see the cinema industry is doing quite well in the Irish Republic and also in Northern Ireland. There are 42 sites that have completed a site survey, 13 for satellite, 17 for network cabling, porthole construction done at 21, network installation done in 13. We've 13 sites fully projector certified with two projectors on each site and we should be showing our first movie in the next few weeks. So please watch this space.

Thank you very much.

NEIL CONNOLLY: Thanks Kevin. I meant to say at the outset that Europa Cinemas published a Digital Guide last year. Some of you probably have copies already. Mareta tells me she has some left – but not many. In any event, if you're interested, the guide is downloadable in PDF format from Europa Cinemas' website, www.europa-cinemas.org. It's a very useful introduction – from a European perspective – to digital cinema equipment and principles.

Now I'd like Ed Fletcher from his perspective as an independent, specialised distributor working in the UK — and Ireland, of course — to come in at this stage to talk about his experience with digital cinema to date and about the UK Film Council's Digital Screen Network.

EDWARD FLETCHER: I'm from the old analogue world of 35mm so I haven't got a PowerPoint presentation for this.

Obviously distributors and exhibitors are not all from the same background and there is such a difference I imagine for some of you sitting in the room looking at Kevin Cummins' model and thinking how does that relate to my weekly film society screening in a town hall? It's kind of the same for independent distributors at one level. If you're Disney and you're thinking I can use this network and go across 50 sites using one main source there are some amazing cost savings to be made and, as Kevin said, especially for advertisers: instead of having teams of people making up ad reels in a warehouse they can use this system to their great advantage and definitely save on costs. But for people who are involved at the independent cinema end, it's kind of like when CDs first came out. I remember the first CD I bought cost more than a CD I'd buy now. It's like that now in some ways. The systems are still very expensive, things are still being decided. At the moment there are certain people who can drive the business for whom there are obvious cost savings. Everyone else is watching this space and seeing how it's developing.

In the UK the Digital Screen Network is indeed already up and operational on 50 screens. Strangely though, one quick footnote on the 50 screens: the Film Council came up with the idea of having the digital roll out based on region rather than looking more strategically at the sites. So the 50 screens already fully operational are mostly in the West End of London – which is great for a distributor – and in the North West of England, in the Lake District and Cumbria. This is what you get from having a project that's backed from a government body rather than a commercial company. For a distributor, when you've only got 50 screens, and the actual costs of making a digital master are higher than for 35mm at the moment, you need to make maximum use of those 50 screens. For the Film Council the aim is to get specialised films – I'll come back to what this means – to areas that don't currently have access to this kind of broad range of programming. That's why they've gone to a region, the North West, where it's very difficult to see specialised films. So that's kind of been a strange one at the beginning.

We did a digital release back in February this year and it became obvious very quickly that it was too early to do it. We released a film on seven prints. One of those in London, in the West End, was digital. Outside of London we did two weeks in Manchester with our digital copy,

and we've got about four one-day bookings in the North West region. Not enough to make it viable at the moment. So the whole project overall makes no financial sense at all. If, instead of doing it by region they'd said right, for independent distributors the best way is to go to all the flagship venues. What are the top ten cinemas that take money for independent distributors and we'll put digital projectors in there. That would actually make sense. But they haven't – they said let's go to places that are under served by specialist cinema. That's one of the early teething problems for the independents, but once it's out to 250 sites that won't really be an issue I think.

But back to this notion of "specialised", because that's the driving force behind the whole network in the UK. I think it was a convergence of ideas for the UK Film Council. There was a certain amount of historical pressure to develop some way of encouraging multiplex cinemas to open up some of their screens to a wider range of cinema. In that idea we include British cinema which has historically had a tough ride at cinemas in the UK. So that's one way of trying to get a broader range of products across the UK, rather than just in London where there is a market for specialised films. The thing is, you don't want to make that too hard, so the term "specialised film" is incredibly broad, and essentially anything that is not a blockbuster is a specialised film. Recent films like *Brokeback Mountain*, *Crash* and *Match Point* are specialised films in the eyes of the UK Film Council; which is important for somebody like me because it makes my films look not just specialised, but phenomenally specialised. Freakish. Most of the energy in the Film Council is going behind backing this kind of middle range of films. A lot of them are American, but it's also the top end of the foreign language market, *Amelie*, *Crouching Tiger, Hidden Dragon*, *Downfall* etc. These are the kind of films they feel can cross over to a broader audience if they were just given the chance. So it's all very laudable, though it brings about its own issues, but let's stay positive about it.

The other fascinating idea behind their roll out of the Digital Network is the idea that it's going to change programming in these venues. That's kind of the key question behind the interest in digital demonstration. If anyone has seen the projection of a 2k system, it's damn good. I don't think people are sitting round querying whether it is as good as 35mm anymore. It is. If you're running a film society you're used to getting a print six months after it's been played in London, then it's going to be way better because you're going to have no scratches.

The audience are going to see something that looks crystal clear, as opposed to having some battered print that's been around the whole of the UK. There are obvious advantages.

Still it's very early to see if it actually changes the programming of cinemas. The obvious difference between digital and prints is that with prints you generally have to make a commitment. Say, Pete's cinema in Dublin: he will have to offer me a commitment for the print that I'm giving to him, because if he doesn't I might be able to get a commitment from a cinema in Manchester to show that print longer. I've only got a certain amount of prints so it's going to make sense to do that over that. If it's digital the costs per copy are phenomenally cheaper, so I could do both at once.

But secondly, there's this idea that once it's loaded on the server at the cinema in Manchester, not only do they have it for two weeks, they could keep the film on their server. As long as there's a dialogue between them and us about what's happening – they might want to just keep it every Sunday afternoon at 2pm – that's ok – or maybe it's a film like *Primer* which some of you saw last night, and you decide that you want to keep running this on Friday night for the next while – at the second screening you might see a 20% rise from the first screening and think, let's keep this on, it's really working in this slot. A film could play for months and months as long as an audience was coming in. That's an interesting idea in contrast to what's been happening in the cinema, particularly in London, where the whole capacity for a film to grow on word of mouth has been completely eroded. Often a film will open in the West End and be there for two weeks, and if you get a third week on matinees you're celebrating. As opposed to the old days – for example I saw a producer the other day who talked about a film he had at the Odeon West End for a year. *Four Weddings and a Funeral* was in a small Odeon for over twelve months. It's a totally different era. Now if you got four weeks it would be an achievement.

Conversely you could have the scenario where if Pete doesn't have to commit two weeks to me, it could also go the other way. He could say, I hope to play it for two weeks but we'll have to see how it goes on the opening weekend. Because he's not had to make a print commitment, if the film doesn't work over the weekend, and he doesn't see any reason why it would start picking up, then on Monday he could just take it off and bring something else in. So these things could work both ways with different advantages. At the end of the day, if the film's strong

enough to work, then it will work, and vice versa.

I wanted to broaden out the debate from digital cinema to other digital issues that would worry me if I was running a film society or if I was running an independent cinema down the line. Obviously the difference between digital and 35mm is that digital is some form of electronic file that can be used in lots of different ways, as opposed to just used on a digital delivery system like the projectors we've just been talking about. With things like video on demand, online distribution, video iPods and all these other things that mean it will be easier for people to get content earlier for many different reasons and in different ways. As there is more convergence at home, people will be able to just download straight to their televisions. If I was running a film society and people could get this product so much earlier directly to their TV, this is the kind of thing I would be more worried about, as opposed to where I can get \$100,000 to kit out my town hall.

A lot of independent producers are currently thinking the same thing. Do we really need distributors? Don't they just get in the way and take some of the money? Which is true. And you may see a whole band of new young film makers working in their locality, going to their local cinema, trying to do more DIY distribution by just having a digital copy and taking it round. There are lots of panels and talks about that, and people are very excited about this idea that you could cut out these middle men and people can have direct access to their cinema or to their film society. Which is in one way liberating. But there is a reason why people like Pete as a cinema operator, and people like me as a film distributor exist and that's to try to persuade the audience to go to see the stuff in the first place. There are lots of interesting questions around that will change over time I think.

I don't have much more to say about the digital distribution system. It's already establishing itself and time will tell, both for people like me and for people running smaller cinemas. When it becomes viable people will do it because the benefit is obvious. Our next digital release which is coming out at the end of April shows the positive side. We've been offered 15 sites with Vue Cinemas in the UK. All of them are in cities or in towns that I've never booked a foreign language film into before. That's really interesting and positive, I would say, and overrides the negatives around whether these screenings are viable or not.

The difficulty is there are still a lot of issues around at the moment. There's a lot of cost about just delivering the digital system. Kevin mentioned the encryption and the codes and these kinds of security devices. In the UK I think we are a step behind in that we've bypassed the satellite and we still have a system in which we still have to post something physical, and we are posting out little hard drives with the film. So there's a cost for producing this hard drive, posting it to a cinema, giving them a set of encryption keys so they can unlock the film so that they can play it for a certain period of time. These costs are coming in at around €120 per screening. The difficulty is if you're a film society wanting to play a film once and you're used to paying €80-100 for a screening, then I'm thinking if I deliver to them digitally, I've got €120 of costs and my minimum guarantee is €80-100.

So at the moment it makes no sense to do digital bookings for one day screenings. It may also be a problem if you're going to do a week's booking – if you're going to do specialised films in places that have never played this kind of product before. If I have a week in Vue's multiplex in Blackburn, I can optimistically hope that the audience will be bowled over by my stunning trailer and poster and the review in the Blackburn Times, or whatever. But the reality is certainly not this. One can hope, but the fear is that if you play a film for a week it could take as little as €500, and if you're going to take only 25% of that as a distributor, you still have the €120 costs. So even if you have a week in this place, you might still actually lose money, or you might make €10-20. The economics of it are still a bit crazy.

Also it negates the role of developing audiences, and the work that independent cinemas have done over many years with film education and with local marketing to try and persuade people on the ground to take risks on films, above and beyond how much your cinema ticket is.

Independent cinemas have been trying to do that for years; trying to widen their audiences through all kind of methods. One thing the multiplexes are going to have to try and do, within the UK Digital Screen Network – if you take equipment from the Film Council you have to commit to playing, I think, 70% specialised cinema across the site. It's not that you just have to use your digital projector to play specialised films, but you must overall show a commitment to specialised cinema. If you've got to do that you've got to get viable at one level. The cinema's not going to be happy with only making €500 a week, so they've got to think about how they're going to develop audiences within local communities. That will either accelerate the process, or it may slow it down as

other multiplexes look at the figures and say it's great having this equipment and it means we can get the Disney stuff and save costs on our projectionists. But if their specialised quota hasn't quite hit the target and they're in trouble with the Film Council, then you might see some interesting dialogue around that.

Then the other market is DVD, which is a digital format, and the question is where that's going. A lot of you screen on DVD and you'll know that there are moves towards HD DVD. There's a kind of VHS/Betamax battle going on at the moment between Sony and is it Toshiba? Anyway, Sony when they lost the Betamax battle, didn't have the Playstation. They may win this time round with their DVD Blue Ray system, which may see us all replacing our DVD collection again with this new system, which will offer higher quality, more room on a disc etc.

These kinds of developments are happening, and meanwhile you've got all the usual problems about price and what people are willing to pay. Are audiences willing to pay for digital cinema? Obviously, no, they're not. They're barely willing to pay the price as it is, particularly for specialised film. One thing that's interesting is the Cineworld Pass, which has been quite a successful innovation. As an independent distributor we've seen box office returns from Cineworld, and for one film we opened in Cineworld Glasgow, 96% of admissions for the week were all cardholders. It shows that price is a factor when people are taking risks on things that they don't know. In the UK Arts Alliance, who are the contract holders with the Digital Screen Network, also own www.lovefilm.com which is an online DVD rental and retail site where business has gone up 530% in the last year. Again they're offering the kind of services where you pay monthly fees to rent DVDs in a package and post them back afterwards. Obviously once broadband is everywhere they won't be posting these things, they'll just be delivered online straight to your TV, or straight to your video iPod or however you want to see it.

These are the kind of things that are going on, and these are the kind of things that if I was running a film society I'd be more concerned about. But essentially if you're running a film society one of the other things is the social activity of going out and watching cinema, and that's why cinemas will still be appealing. There'll still be a role for cinemas in the future. What's more interesting from our perspective is whether you will still have that choice there. Will it be like what happened to specialised film on television; what happened over the last few years when multi-choice TV came in, is that specialised films got pushed to their own niche channels and got taken off terrestrial television.

Particularly with foreign language films, it's kind of akin to DIY shows or gardening channels or travel channels. It's just one of those things – if you're strange you might want to go to Channel 320. The worry is where that audience have gone is they've just gone on to DVD and online renting places instead. So do people still have that choice and what does digital really offer? Lets see how it pans out over the next few years.

NEIL CONNOLLY: Thanks Ed. Our final panellist is Peter Walsh who, in his role as Cinemas Manager at the Irish Film Institute, is in the somewhat unenviable position of having to make decisions now regarding digital technology as well as actively respond to current, very tangible developments in digital cinema roll-out in both Ireland and the UK.

PETER WALSH: To some extent my contribution is based on what I said at a similar recent seminar at the Dublin International Film Festival. Feedback I got from that suggested that I sounded somewhat negative about digital cinema. I'll try to be more positive on this occasion

The IFI like any other cinema is just watching and waiting to see when it is appropriate for it to go digital. There are basically two considerations, one is technical and the other is the business model. The main technical stumbling block for the IFI, which hopefully will be overcome eventually, is that there were two systems and the system operating in the UK, unbelievably, was incompatible with the system proposed for Ireland.

But DCI compliance, which Kevin was alluding to, should hopefully sort that out. Before today I gathered it was going to be sorted out this month. Kevin is now saying January 2007, and it possibly might even be later.

The deal that Kevin's company is proposing appears to be quite similar to what Arts Alliance are providing in the UK, and it almost seems like the deal is too good to be true, i.e. you don't pay for the equipment. But it appears to be a genuine offer, and one that the IFI, like most other people, will take up. How soon, still remains to be seen. It's probably true to say that the IFI sees digital not as a replacement for 35mm – at least not in the immediate future – but as something that we would run in tandem – in parallel – with film. Personally my own take on the film versus digital debate is that film and digital delivery systems are simply different. In particular I think they are aesthetically different. The common assumption about digital being superior and perfect is essentially nonsense

because it is a copy of 35mm, and how could a copy actually be superior to the original? But it's true to say that digital copies don't get scratched and damaged in the same way that 35mm prints do. Not that 35mm prints should get damaged; damaged prints are just the result of bad practice within the film industry.

The film industry, in a way, is its own worst enemy – on the production and distribution side probably the technical standards of film have been dropping for years and years. A release print in the cinema today is so far removed from what went through the film camera originally that it bears only a passing resemblance in terms of quality to what it should be. With digital it's actually possible to stay closer to what was the original quality of the film than it is on film itself.

Before finishing that debate as it were, as a programmer, if we were doing a Stanley Kubrick season for example, I doubt if we would want to show *2001: A Space Odyssey* – a film shot in 70mm – in digital, even 2k digital. Perhaps in the future when 4k digital has arrived that is a film that you would show digitally, but until then you probably wouldn't because it would not be a fair representation of that film.

But for repertory cinema the digital revolution – we can probably call it that – is definitely a good thing. For many classic films nowadays, the best copies are actually digital ones. That applies to *Gone with the Wind*, *Casablanca* and a film we played recently, *Brief Encounter*. That's partly because it is easier and cheaper to make a good digital copy than it is to make a good film copy. Making a good film copy is cumbersome and involves going back to find the original film elements. With digital you can kind of cheat and cover up scratches and all the rest.

Still on that subject, with silent cinema, which is pretty cumbersome and difficult for even a cinema like the IFI to do because of the different speeds that silent film needs to run on, digital offers various advantages. It is easier to show a silent film digitally, and it is certainly easier to combine music with showing a silent film at the right speed than it is on 35mm.

But trying to turn this around to look at where it has left film societies, because in a way the IFI is one thing, and operates on a certain level, and film societies are different. I started out working in film societies showing films on 16mm. At that point even some colour films were

only available in black and white on 16mm and we were still glad to see them and glad to show them. Nowadays most film societies, I imagine – some are privileged and have upgraded to 35mm – are showing on DVD. DVD in its present form is really not quite good enough. I deliberately watched a bit of *Saraband* in the large theatre here on DVD and it was a pretty painful experience. Actually that's not too extraordinary – when the IFI showed *Saraband* on DigiBeta with a fairly good LCD video projector the results were basically disastrous. So Ingmar Bergman's original idea of not having any 35mm prints of that film, but shooting it digitally and showing it digitally, was in theory fine but in practice didn't work because we didn't have what Kevin and Arts Alliance are now promising us, which is proper digital cinema. So to be positive again about digital, if we had had that system already up and running we would have been able to do justice to *Saraband*.

In terms of the kind of technology that film societies can realistically afford, I would agree with what Ed was saying in terms of whether DVD at present is good enough. Perhaps Blue Ray or HD DVD will be good enough, at least for film societies operating in relatively small spaces with relatively small screens.

Getting back to the IFI again, I think that if the business model that is being proposed is for real, and I have every reason to think that it probably is, we will go ahead. We will also assume that the digital copies that Ed produces from the UK will be compatible with the equipment that we get from Kevin at Digital Cinema Limited. Hopefully there will be not too much expense involved in us showing a digital film. I'm still not sure where Kevin will recoup the costs of equipping the IFI if we are showing films supplied by the UK and Ed is not willing to pay him a fee for the privilege of showing it on his equipment. I'm also not sure – again, coming back to film societies – about how generous Kevin's outfit will be in terms of relatively small film societies, and installing equipment in venues where it will be used occasionally rather than regularly. One assumes that Kevin's investors will eventually want a return on their money. I just can't see exactly where that's going to come from in a country as small as ours.

NEIL CONNOLLY: Thanks, Pete.

KEVIN CUMMINS: Can I answer Pete's question? With regards to the installation of equipment, we have actually site surveyed a number of the art house cinemas and a

number who have big screens will be getting our digital equipment. After meeting access CINEMA people today I discovered that there are another 20 or so sites that I didn't know existed who show in town halls and places like that. I will be looking to meet with them and see what facilities we would be able to provide them with. As far as I'm concerned the more sites I can get up on the digital network, the more sites that the distributor will have available to show content and he'll be more interested in getting some content onto the network itself.

NEIL CONNOLLY: If some of these sites are showing 90% independent, non mainstream films and only a very small percentage of Hollywood blockbusters, where does that leave you? How do your investors recover their significant investment?

KEVIN CUMMINS: The model is based on the whole country, not just based on individuals. You're looking at an average of 10,000 prints coming into this country and that's where the cost of the distribution lies and that's where we're going to be getting our revenue stream back from. We may lose on some movies and gain on others, but overall the aim is to get the network available to everybody.

NEIL CONNOLLY: I think it's time we gave the audience a chance to get in on the discussion but if it's ok, I have another question for Kevin first: Is Ireland just a model, is it your aim to get up and running here in order to demonstrate that it can be done anywhere and is your ultimate objective to go beyond Ireland?

KEVIN CUMMINS: At the moment there are about five different digital film distribution networks that are going in round the place. You've got XTC running one on the European continent, you've Arts Alliance running one in the UK, and ourselves running one here, the whole of Ireland north and south. In Brazil you've Rain Networks who have about 220 sites up and going, but their sites are split between what we call e-cinema and d-cinema.

One thing you could look at for arthouse cinema is to get an e-cinema projector rather than a d-cinema projector. The d-cinema projector comes in at around \$50,000 whereas the e-cinema projector comes in at around \$7,000. It depends on how often you're going to be using the system, what content you're going to be getting. That determines whether you're going to get an e-cinema projector or a d-cinema projector. The quality of an e-cinema projector is between 1k to 1.5k pixels per square inch, whereas the d projector goes from 2k to 4k. That's

the difference in the quality. For the art house film society audience, that quality could be acceptable to them.

Then in the United States there are three projects going on over there, but they're all in their infancy. It's beginning to see a number of industry participants getting together and getting the digital networks out there. If we could get the whole of Ireland on that would be the first territory to be fully converted. Hopefully we'll be the first ones in the whole of the world to get that done.

AUDIENCE QUESTION: What kind of increased costs will we incur over what we're paying at the moment for this?

KEVIN CUMMINS: At the moment what has happened in a number of countries such as Italy and France where there are a few pilot systems installed, the theatre owners have added another €1 or €2 for someone to go in and see a digital movie. For example, with *Star Wars* they had two screens showing it on film print, and one screen showing it on digital, and they got the extra €2 from the people going in to see it. But we don't see costs to the theatre audience going up because we're doing every cinema, we're doing every screen so it's not just one in a site, we're doing the whole shebang. For you as a theatregoer there should be no increase to you. Remember there is a big debate going on at the moment with the theatre owners and the distributors because the distributors are going to see savings in distribution costs, so they'll be passing on those savings to the theatre owners.

What you have seen in this country is that the quality of the theatre you're going to has drastically increased. The comfort of the seats, the stadium theatre, the sound systems are all 5.1 digital. The experience of going to the theatre, compared to ten years ago, with the newer screens is quite different. In the new one open in Dundrum they have a VIP area which is an extra €5, but you have a bar, you have your own table. A person come round and serves drinks while you're watching the movie. So you as the theatregoer, are you going to pay the extra €5? Yes, you do. There are 200 seats and it's booked up every night.

AUDIENCE QUESTION: I'm from the Letterfrack Film Society. Is it as simple as me saying to you, yes, we'd like to have your equipment, will you give us some?

KEVIN CUMMINS: Yes it is. Simple as you saying we'd like to meet up with you, discuss what you have and see what we can do. My business cards are here for anyone who wants to take them.

The basic cost to the theatre owner from our perspective – we’re giving them all the theatre equipment, the network equipment and the satellite equipment for free – the only thing a theatre owner has to build and pay a cost on is the additional porthole. I legally cannot put a porthole in your building. That’s your cost. And the porthole glass, which usually runs to about 11,000. That’s if you’re in a fixed theatre. But if you’re in a town hall or you’re a moveable feast, the type of system we’re looking to put together would be a digital mobile system. We have two systems that we are currently evaluating that are small enough and capable enough, but we have to do some tests with some art houses so I need two volunteers to try it out. If anyone wants to volunteer to be a test case, that’s what we’re hoping to do for that aspect of it.

JANBE DOOLAN: A quick question in relation to content: Can you put anything up on your satellite? Can you talk to new content providers about video on demand say, or broadcast television, so that for instance venues around the country that mightn’t otherwise be viable – some arts centres or film societies, say – might be able to cross subsidise their activity by using your equipment to download and screen alternative content.

KEVIN CUMMINS: It is most definitely a possibility, and that’s where we’re going to recover some of the costs that Peter is talking about. We are currently engaged in negotiations with Sky and BBC for their archive of educational content, so we will have a database of the content that will be available to people to purchase, to download, to play. So you will have all the educational content. The Department of Education is very interested in it because they’re looking into funding schools using the cinema during the day to view educational programs. That’s another aspect of using the equipment that we will have out there.

JANE DOOLAN: Who will pay for the masters to create all that archive?

KEVIN CUMMINS: They’re already there. All the BBC archive of educational programs is already digital now. All of it. In Northern Ireland there are about 240 educational programs now available on a digital system. I used to work for RTE so I know they have a project running that is currently converting some of their old content. It’s an initiative that needs to get a up bit more steam in this country as we need to go through our archives to get the education content converted. The BBC have already got theirs done. There was a UK fund that converted that. So they’re making that available, for a fee

of course, and that’s why we’re talking to the Department of Education to see if we can do a deal on that.

On live content, we are currently talking with the Ryder Cup about showing the Ryder Cup live in the theatres where we have the systems installed. You’d be able to see live soccer matches on a Saturday morning with Sky Sports. Various things like that. You’ll also have corporate events you can do where you can rent out the system and people can hook up a laptop like we’re doing here and use the theatre during the day for corporate meetings. So there’s a lot of additional revenue that the theatre owner can get once the digital system is installed. You can literally play anything on it.

AUDIENCE QUESTION: You see no problem with dealing with existing cinema owners who are also distributors or cinemas that are owned by distributors?

KEVIN CUMMINS: There are quite a few of them.

AUDIENCE QUESTION: You see no problem with them being happy for you to distribute the films instead of themselves?

KEVIN CUMMINS: We’re not actually distributing the movie. We’re just the delivery process. You still have the distributor making the deal with the theatre owner. We’ve just done a deal with the distributor to say we’ll deliver it for them. The theatre owner’s still doing the distribution contract with the distributor. Look at us as a supply chain replacement. Instead of them getting the film print from Technicolor or Deluxe, they’ll be using the digital system to get it to you. We’re not interfering with the distributor/theatre owner negotiations. That’s out of our ballpark and the further we stay away from that the better.

IAN WHITE: This question is addressed to Peter. Further down the line, when lots of cinemas in Ireland have digital running parallel to 35mm, as 35mm starts to become more and more redundant, do you see an issue rearing its ugly head with reference to technical staff and projectionists? Will management say we can push the button? – on your bike! Can you see that happening? Will there be a controversy around getting rid of staff?

PETER WALSH: It’s true that a lot of projectionists I know are worried, but they tend to worry about everything.

NEIL CONNOLLY: Perhaps this is something that they really do have to worry about.

PETER WALSH: I don't think so. Maybe I'm wrong. At least as far as the IFI is concerned, we have three projectionists and because we do so many screenings, and they're all different formats, there's no way that after installing digital we would think that one projectionist or even a part-time projectionist was redundant.

IAN WHITE: I was thinking mainly of the multiplexes that employ a number of projectionists on a shift rotation basis.

PETER WALSH: I think it will probably take some time, but one question that did strike terror into the projectionist, was that service providers would say, do you want your controls in the manager's office or in the projection booth.

EDWARD FLETCHER: But since projection is not just the image, you still need a projectionist to keep an eye on sound levels, auditorium heating, and these kinds of issues. I think necessarily there'll be slimming down in the number of projectionists, particularly in multiplexes. But it still won't be managers pushing buttons.

NEIL CONNOLLY: The DCI specifications do extend over the whole system which includes the management system which certainly can be operated from the manager's office. But I think we're a long way away from that just yet.

KEVIN CUMMINS: Theoretically you could run every theatre in the country from one spot if you really want to go to extremes. Practically that's not going to happen. Because it's a digital system you can set up automatic schedules on it, the whole lot can run itself, but if you look at the practicality of it, I've yet to see a movie start on time, because of a crowd coming in or whatever. You still have to wait for the projectionist to say, ok the crowd is in now, let's play. So you will still have someone pressing the button.

The type of work they'll be doing will be slightly different, because they'll all have to be retrained to use the computer equipment. The digital projection system does need hands on treatment as well, the same as the analogue projector. Hands on work still has to be done. One of the big issues of concern is that the lamp in the projector contains halogen gas, so it needs specialised handling so there are additional hazards with the digital projector. Because it's a digital projector the amount of heat that's generated to get the image out – there are 2,000 mirrors in the back of the lamp that's generating that heat. So there's still going to be work for the projectionist, though they're going to need to be retrained. I don't think there'll be a reduction in them, though I'd say there'll be a trimming down over a number

of years as Peter said. They call it the natural wastage.

RUTH BARTON: I was wondering what the comparative scale is between, at the moment, distributing small films to half a dozen cinemas that may be geographically spaced. Will it be easier to distribute that one small film versus the latest *Starwars*, the latest blockbuster, when it goes digital? Will it be easier to distribute that one small film, Turkish, sub-titled, whatever. Will it be cheaper to do that or will the competition and the relevant scale still be the same?

EDWARD FLETCHER: That is a core question for me. At the moment there's an obvious advantage if you're Disney going on 500 prints, if instead you're going to have one core cost and then distributed by satellite it's going to be a hell of a lot cheaper doing that. If you're an independent distributor the idea is that I could suddenly go on 500 prints because I don't have to buy those and there's a phenomenal cost saving. But I'm not going to get 500 cinemas to programme my type of film. So that's what interests me. Will it actually change what people put into their cinemas? Probably not.

So in that way I'm still on the same booking patterns that I am on at the moment, which is relying on a capital opening, be it London or Dublin, and then that copy or a different digital copy going to other venues over the next few months. It does mean that if a film opened in Dublin and the next week it was in Cork, then the week after that it could play in all your film clubs at once, as opposed to the booking system we currently use. So that could happen.

But then it comes down to the problems of Kevin's delivery costs, which don't equate to what I am getting paid for your one day booking, so it's not viable for the kind of booking pattern that exists at the moment. The only way it's going to be made more viable is if Kevin's costs come down or if your booking patterns change. But the reality is, you're not going to decide to play it for four nights just because it's digital. You're not going to do that because you probably just don't have the audience within your catchment area to justify that.

PETER WALSH: On a similar subject, we were talking earlier about why certain films only open in very few cinemas, including the IFI. Two recent films I have experience of would be Rebecca Miller's *The Ballad of Jack and Rose*. There appears to be a reasonable amount of interest in that film in this country. Is that because people like Daniel Day Lewis? Certainly very few people

saw Rebecca Miller's earlier films. But the UK distributor of that film, Entertainment Films – admittedly their usual *modus operandi* is to get 1,000 prints, spend a million on TV advertising and that's it, it's over within two weeks – I believe them when they said they could not find a single art house cinema in London willing to book that film, and it's taken them six months to do so. That's the problem with the UK Film Council, they seem to think if we have 2,000 cinemas equipped with digital projectors then 2 million people will see Rebecca Miller's film. Of course it's not going to happen.

Pathé Distribution, who are lucky enough to be releasing the new Pedro Almodóvar film, and who also released *Transamerica*, told me that, with *Transamerica* – which is showing in, I think, 14 cinemas in the West End - unlike the Rebecca Miller film, London exhibitors were very keen to show that film. They had to restrict it deliberately to 14 sites because otherwise the entire potential audience for *Transamerica* could have seen it in the opening weekend. They're going to have to do the same with Almodóvar's *Volver*, which every single cinema in the UK and Ireland will want to show. Potentially the entire audience for that film could see it on the opening weekend.

EDWARD FLETCHER: Which again brings in an interesting avenue for DVD because you could have a scenario where if you could make it available to everybody in the opening weekend, because the costs aren't prohibitive, then the DVD could come out two weeks after. Or you could just literally have a week – a video on demand window of a week. An online rental window of a week. Everything could be a week – or it could be a day! There wouldn't be these big gaps between theatrical and DVD and television. This is obviously what distributors are obsessed about at the moment: are my windows collapsing for making revenue here, here and here? The people who are fighting against those windows collapsing are people like the Extravisions around the corner. They're the guys who have a video store based on a certain kind of window, and if that collapses... well it's high street retailers who sell DVDs who'll gain... At the end of the day, I don't really mind where people buy my film, as long as it's the same number or an increasing number. In many ways, online I've got a better chance, more so than cinemas. If online became a virtual cinema for me and more of my audience went to download a film rather than go to the cinema I would get much more income because people like Pete wouldn't get to keep most of the money. So I'm quite attracted to that model obviously. But this is a very fluid system where there will be winners and losers.

NEIL CONNOLLY: So you didn't quite believe your earlier argument about the exhibitor as persuader then, Ed?

PETER WALSH: Well, that's similar to – it now seems like a different generation – when people like reviewers had some influence in generating a reputation for a film, and people would go and see it. I remember when I lived in the UK films would run for something like three to six months at the Academy in Oxford Street. Significantly the Academy no longer exists. It's Marks & Spencer's now. The whole idea of slowly building up a reputation or an interest in a film seems to be completely gone. Soon, we'll just be getting them with our Sunday newspapers on DVD.

EDWARD FLETCHER: But interestingly, in the US they still kind of have that system. There's still a chance for an art house distributor to launch one print in New York and watch it grow before pushing it out across the country. Traditionally the US drives most changes in the film industry but this is one area which is very different to the UK, where it is very much your opening weekend that's make or break.

KEVIN CUMMINS: You also have the case where you have a number of theatre owners who are starting to have film society nights, where the local film society will use the theatre on a Monday night or Tuesday night. I know that down in my home town, Monday to Wednesday, the cinema is fairly empty. It's only Thursday, Friday, Saturday, Sunday that people go. So he's looking to do alternative film shows on the Monday through to the Wednesday. So there are avenues where you can show your content. Regarding costs – on a large release you're still going to have the encryption cost to have your digital master made. That's going to be \$5,000 to \$10,000 depending on the length of your movie. But if you're releasing say a Harry Potter which is 100 prints, your current cost is between £500 - £800. That's your individual film print cost. Then you have the distribution costs on top of that, and your collection costs, and your destroying cost because you have to send prints to Italy for the film to be destroyed because you don't want copies of lying around. Overall the cost for a film print for a distributor is between £1,200 - £1,500. If we're able to reduce that, because when we make a digital print, once it's on the system then to delete it, it's just 'Delete'. You don't have to destroy anything. The costs are going to greatly reduce.

What exists today is what we call the three-tier network. You have 40 prints of a movie coming in. It hits the multiplexes and the big guys first. Two weeks later it goes

down to the second tier and two weeks after that it goes down to the third tier. The advantage of the digital network is that the theatre owner will be able to say, I have the digital equipment, it's available digitally, why can't I have it on the first week? So you should see more and more movies getting down to the regional areas an awful lot faster than they do currently.

The number of movies has considerably increased. If you look back, five years ago on average there were about 100 - 120 movies coming into the country. Last year there were 252. The problem is quality. How many of them are actually movies that people went to see? The box office last year was actually down because the quality of the movies wasn't very good. Again it comes back to the content. People will only go to see content they can enjoy. By word of mouth, that's how it goes. If you can reduce the cost of getting the movie out there then you can spend more on advertising and more people might come in to see it. There is a trade-off that's going to happen. It is a changing world, and it's going to be exciting for the next five years. Hopefully we'll be at the forefront of it.

NEIL CONNOLLY: Perhaps that's a resoundingly positive note to finish off on – for Kevin anyway (laughter). But would anybody like to ask a final question?

AUDIENCE QUESTION: I'm sorry if I'm asking you to repeat yourselves at all but I know that Pete and Kevin mentioned that there's an incompatibility issue between the UK digital system and the one Kevin is installing in Ireland. If for example Kevin was to give us all the digital equipment he is supplying by January 2007, then would you, Ed, have the content to supply to Irish cinemas by then?

EDWARD FLETCHER: I would by then, yes. I wouldn't now. I have digital product now that I can't supply here, but I will have by January 2007.

KEVIN CUMMINS: It depends on the supplier of our software. They have to make it DCI compliant. We're waiting for them to get it completed. Unfortunately they're in the United States and I have to wait for them to get it done. Sooner rather than later as far as I'm concerned. But we are encoding movies ourselves to get content onto the network and we're covering that cost ourselves because we want to get content up there. But eventually, sooner rather than later, we'll all be on the same format, so that a movie encoded in France or in Germany or the UK will play on any system. At the moment, what you have is a QuVis player and you have an Avica player, which is what we use,

and that uses an MPEG format. The QuVis player uses its own proprietary QuVis format over in the UK. But both manufacturers are moving to the MXF format and JPEG 2000. Depending on when this is done by both companies, eventually their encoding will be the same.

NEIL CONNOLLY: I think it's everybody's aim to be interoperable and compatible but I think it's also true that it will take time to achieve this. The technical challenges posed by the DCI specifications are fairly major ones.

KEVIN CUMMINS: That's true, and the other thing to remember as well is that – typically European – we don't want to accept the DCI standard, we want to come up with our own. So you've the European group meeting at CineExpo in June and they are discussing the European standards. Unfortunately they just can't seem to agree on one standard that will work for everybody.

It's a debate that's going to continue. From a theatre owner point of view you want to be able to play a movie irrespective of where it comes from, so we've got to make sure the system is capable of playing MPEG content, and JPEG content, and it's all just totally seamless.

NEIL CONNOLLY: One last question, if there is one?

AUDIENCE QUESTION: Can I ask each one of you, when we reach a stage at which the digital systems are up and running properly, do you think digital cinema will be a better way of doing business?

NEIL CONNOLLY: For me just to give a simple answer, I want to wait and just watch for a little longer before deciding. What advantage digital cinema offers will depend on how quickly digital copies become available – and on projectors and players becoming more affordable – either because somebody else, like Digital Cinema Limited, pays for them or because the cost to exhibitors prepared to buy projectors and players themselves comes down. Right now I could buy a system from Arts Alliance in the UK for about £75,000 but there are all kinds of issues about upgrading and obsolescence to be considered.

EDWARD FLETCHER: The additional things Kevin mentioned are the interesting ones – if I was a theatre operator it would be things like do I screen football in my cinema on a Monday night, Champions League games. As you said, the weekend is where your core audience is. On those other nights maybe you can be a bit more flexible with digital and there's a chance to do all kinds of things. But it depends on what you're running a cinema for, on

whether you're running it to show films, or running it as a pure business just to get people to pay to sit on a seat and watch something. It depends on how you want to run your business. We've touched on other reasons why it might be beneficial in terms of staff costs and getting product earlier. If you run a cinema regionally then in the future you will have a chance to get films earlier than you currently do. These are all positive things.

PETER WALSH: I don't think in the end it's going to make a great deal of difference, but there are going to be teething problems. The date when there's going to be compatibility between Kevin's equipment and the digital copies Ed can provide is probably going to go back even later. Meanwhile we show all kinds of different formats: DVD even, DigiBeta and whatever. That's something else. People seem to think that if you make your own movie and put it on DVD all these digital cinemas will be able to play it, but they won't.

Something like DigiBeta is interesting. For example, Kevin was talking about making digital copies. All of this material already exists in the digital domain. You see it on TV. TV stations use DigiBeta, which is a quality that is better than DVD. The trouble is that for a film society the cost of a wonderful Sony DVD, DigiBeta and BetaSP player would be too high.

EDWARD FLETCHER: DigiBeta is a whole interesting question and something that probably should have happened five years ago and in a way paved the way for 2k. But it was almost like, no we want to wait until the real thing that's coming later. But there was a missed opportunity I think in the mid-90s to establish DigiBeta as a real format for cinemas and particularly for art house cinema because it's a format that we get delivered as distributors and we master our DVDs from DigiBeta. So it's already a format we all have and it looks very good. If you've got a good projector then it can look very good. It's generally cheap and very accessible.

PETER WALSH: Talking about the UK Film Council who, I think foolishly, are giving people like Cineworld and Vue cinemas virtually millions of pounds when five years hence Vue and Cineworld are going to take a position on digital cinema. If it's working they're going to buy their own equipment, and they're not going to stand for any nonsense from the UK Film Council saying you haven't shown any specialised films. They're basically going to say, take your equipment back. We'll buy our own now, because we know it works. That's just like the UK Film

Council saying to Warner Bros. we want to give you loads of money to make prints of *March of the Penguins*. They'll say that's nice, we're going to make those prints anyway but if you want to pay for them be my guest. Time Warner is a small company, they need subsidising.

KEVIN CUMMINS: Very quickly – the systems we're installing will be able to play DVD as well as your standard download system.

PETER WALSH: But you're not providing a DigiBeta player are you?

KEVIN CUMMINS: We're providing a DVD player.

NEIL CONNOLLY: In the UK the Arts Alliance projectors are supplied with an interface to allow DVD and DigiBeta to play out on them.

PETER WALSH: But you've got to get the kit yourself.

KEVIN CUMMINS: In our case we're providing you with the kit. But to respond to the question about whether digital cinema will be a better way of doing business: It's a different way of doing business. How that way works out only time will tell. We're taking a gamble and my investors are taking a gamble that it will work out for them, but it is like anything. Nothing ventured, nothing gained.

NEIL CONNOLLY: I think there's a lot of gambling going on including that by the UK Film Council in terms of testing a market that may prove not to be a market at all. But I guess it has to be tried – as Kevin said, "nothing ventured, nothing gained."

On that note we really do have to finish up, so thanks very much to all of the panel for their contributions and to you, the audience, for coming along and participating. I hope that you found some of the discussion useful.