DIGITAL CINEMA UP AND RUNNING

Accelerating roll-out in the US while Europe pauses to reflect

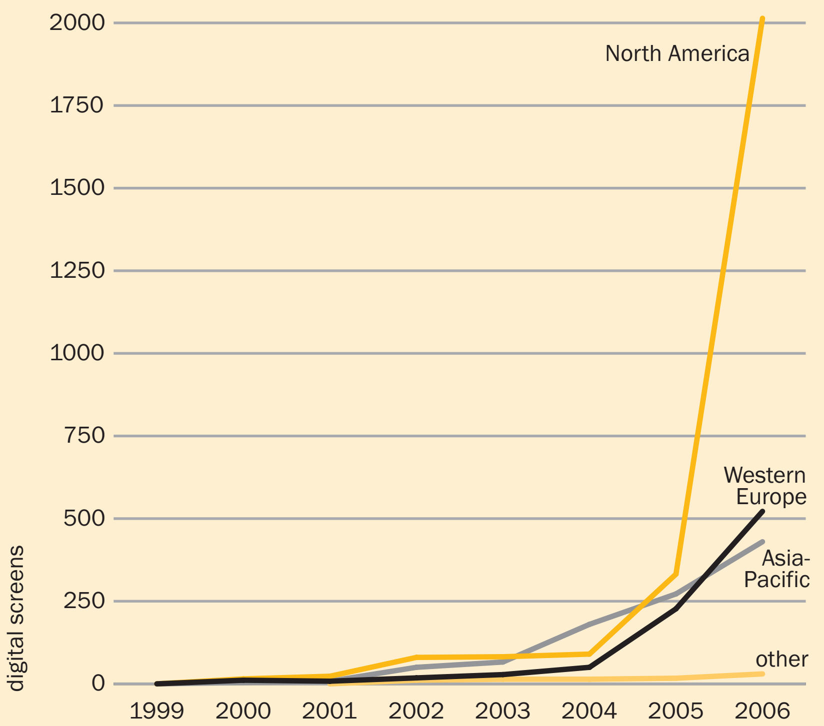
Over the past eight years, Screen Digest has been following the discussions and early testing phases of the process to digitise the world's screen base, and analysing the progress (or lack of it) of the pioneers. The medium has a number of issues to contend with, not least the cost of converting to digital and finding the business model that fairly balances the spread of costs needed to finance conversion.

The past year has confirmed that digital cinema roll-out has begun in earnest in the US, but the rest of the world is lagging behind the world's leading cinema territory, as other countries come to terms with the system being pushed by the US studios and the changes that this will impose on their current film markets. We wrote last year that 2006 would be a year of negotiation and signatures as a pre-cursor to full roll-out

The roll-out is well under way in the US principally through the work of AccessIT, as the US cinema exhibitor grouping brought together by Regal, AMC/Loews, Cinemark (DCIP and NCM) has yet to finish its deliberations about the best way to proceed and Technicolor has yet to complete its beta test. The NCM group involves 14,000 screens, about 35 per cent of the market, and will have a major impact on how the market develops in the US. The only European circuit to have announced and begun a full roll-out is Kinepolis in Belgium, typically ahead of the game, with the Benelux group Utopolis having digitised 30 per cent of its screens before stopping to wait for further advances in digital content availability.

We have still to see full compliance with the Digital Cinema Initiative (DCI) specifications released in June 2005, although the extent of digital releases in the US suggests that American studios are happy to go with the market as it evolves towards full compliance. Recent developments in servers also suggest that we are close to reaching the necessary standard. The reticence of the NCM group expressed in 2006 over technology issues should soon be a thing of the past.

Growth of digital screens by world region



Source: Screen Digest

D-CINEMA SCREENS

The number of commercial d-cinema screens in the world grew by 253 per cent in a year, from 848 to 2,996 at end 2006. This number doubled between the end of the first half 2006 and the end of the year, from 1,474 d-screens to the eventual 2,996.

The rate of change has largely been the product of an industrial scale roll-out in the US. AccessIT is driving this progress and has now exceeded 2,000 installations of the 4,000 initial target the company set itself. The US experienced a growth rate in commercial d-cinema screens of 506.6 per cent between 2005 and 2006. This compares with 268.9 per cent between 2004 and 2005, and only 9.6 per cent the previous year. However, with the target of 4,000 d-screens approaching, there is some debate as to when the rest of the US will follow.

Western Europe is still showing growth signs, although a significant proportion of the 130 per cent growth rate in 2006 was down to the progress being made in the UK's government-funded scheme rather than a commercially inspired roll-out. However, Germany is developing strongly without government intervention at this stage, adding 72 d-screens to the 33 already there at the beginning of 2006.

A useful measure of how far and fast a market is developing is to look at average screens per site over a market or circuit. Using the development over a year, Luxembourg comes up as the most advanced market, with a screens per site ratio of 6.5. This is due to the small size of the market and the pioneering spirit of its leading exhibitor Utopolis. The US has grown from an average of two screens per site at end 2005 to 4.8 at end 2006, highlighting the site by site approach of AccessIT's main client Carmike Cinemas. Another smaller territory, Iceland, also has a relatively high screens-per-site ratio, but this only refers to one site of exhibitor Sam Film with three d-screens installed during 2006.

Number of screens converted to high-end digital

	2000	2001	2002	2003	2004	2005	2006
Austria	1	1	2	2	1	15	21
Belgium	1	1	1	4	14	21	34
Denmark	0	0	0	0	3	5	5
Finland	0	0	1	0	0	0	1
France	1	1	3	4	5	18	32
Germany	3	2	2	2	2	33	105
Greece	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	23	26
Italy	0	1	1	2	4	26	41
Luxembourg	0	0	0	1	3	3	13
Netherlands	0	0	0	0	3	16	27
Portugal	0	0	0	0	1	2	4
Spain	2	2	4	3	1	6	19
Sweden	0	0	0	1	1	5	6
UK	3	0	3	8	10	38	148
EU (15)	11	8	17	27	48	211	482
EU (25)					50	213	487
Cyprus	0	0	0	0	0	0	1
Iceland	0	0	0	0	0	0	3
Norway	0	0	1	1	2	3	23
Switzerland	0	0	0	0	0	13	13
Bulgaria	0	0	0	0	0	0	4
Czech Republic	0	0	1	1	1	1	1
Estonia	0	0	0	0	0	0	0
Hungary	0	0	1	1	1	1	1
Latvia	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0
Romania	0	0	0	0	0	0	0
Russia	0	0	1	1	0	0	2
Slovakia	0	0	1	1	0	0	0
Slovenia	0	0	0	0	0	0	2
Western Europe	11	8	18	28	50	227	522
Central/Eastern Europe	0	0	4	4	2	2	10
all Europe	11	8	22	32	52	229	532
USA	13	19	76	77	85	324	2,003
Canada	2	4	4	5	5	8	11
North America	15	23	80	82	90	332	2,014
Argentina	0	0	0	0	0	0	0
Brazil	0	1	4	7	9	9	10
Colombia	0	0	0	0	0	0	1
Mexico	1	1	3	3	3	4	5
Latin America	1	2	7	10	12	13	16
Israel	0	0	0	0	1	1	1
South Africa	0	0	0	0	0	0	2
Africa Middle East			0	0	1	1	3
Australia	0	0	1	2	2	8	25
China	0	0	33	34	93	124	156
Hong Kong	0	0	0	1	1	1	3
India	0	0	0	0	2	3	4
Indonesia	0	0	0	0	0	0	1
Japan	3	7	14	18	43	59	71
New Zealand	0	0	0	0	0	0	0
South Korea	1	1	1	3	9	43	130
Singapore	0	0	0	1	21	24	27
Thailand	0	0	1	4	5	5	7
Taiwan	0	0	0	3	4	5	6
Turkey	0	0	0	0	0	0	0
Asia-Pacific	4	8	50	66	180	272	430
WORLD TOTAL	30	39	159	190	334	848	2,996

Source: Screen Digest

Digital screens per site

	2005	2006
EU (15)	1.45	1.54
Western Europe	1.40	1.50
Central/Eastern Europe	1.00	1.25
Europe	1.40	1.49
North America	1.95	4.71
Latin America	1.00	1.00
Americas	1.89	4.57
Asia-Pacific	1.32	1.35
WORLD	1.53	2.68

Source: Screen Digest

PROJECTORS

Digital projector manufacturer Christie accounted for 73 per cent of all known projector deployments worldwide at end 2006, up from 54 per cent in 2005, and the second consecutive year the company has held the majority market share. Its largest market was by the far the US, where it accounted for 91 per cent of all projectors deployed—a direct result of its position as designated equipment supplier in the d-cinema deployment of AccessIT. In Europe, Christie's overall market share increased slightly to 38 per cent, up from 33.6 per cent at end 2005. After the US (1,883), Christie's largest market was the UK (100).

Barco is still the dominant projector choice in Europe, accounting for a 48.5 per cent share last year—a slight fall from the majority 50 per cent share in 2005. This total also includes Barco's OEM deals with both Cinemeccanica and Kinoton. In Asia too, Barco accounted for the majority 62 per cent share in 2006. However, Barco's share dipped to 6.4 per cent in the US (from 18 per cent in 2005), even though its number of active deployments more than doubled during the year. In fact, US became Barco's leading market in terms of number of deployments (129), followed by China (120) and South Korea (81).

At end 2006, NEC accounted for just over three per cent of all DLP Cinema projectors. It more than doubled its total in Europe to 66, while in the US it completed first deployments in commercial cinemas with 2K models. The projector numbers includes commercial cinemas installations only, and therefore does not include sites in the beta test of Technicolor.

Since becoming active in the market in 2006, Kinoton's leading market has been Germany, where its projectors now account for over 30 per cent of the market, a direct result of its partnership with XDC. Cinemeccanica's leading individual market is Italy, although it has also made progress in Spain. Cinemeccanica now accounts for over 10 per cent of all d-cinema installations in Europe.

PROJECTOR RESOLUTION

The DCI recommended level of 2K is vastly predominant in the digital cinema world. The remaining 1.3K projectors used in the early tests are almost gone from cinemas, although they do remain in a few limited areas.

The entrance and early deployment of the Sony 4K now raises the projection stakes for 2K, although the chances are that 2K will be predomi-

Resolution of installed projectors

	1.3K	2K	4K	total
1999	6	–	–	6
2000	23	–	–	23
2001	34	6	–	40
2002	125	12	–	137
2003	153	23	–	176
2004	215	113	–	328
2005	228	626	–	854
2006	233	2,727	18	2,978

Source: Screen Digest

Leading digital cinema territories end 2006

	screens
USA	2,003
China	156
UK	148
South Korea	130
Germany	105
Japan	71
Italy	41
Belgium	34
France	32
Netherlands	27
Singapore	27
Ireland	26
Australia	25
Austria	21
Spain	19

Source: Screen Digest

nant for the foreseeable future, given that roll-out has begun in the largest territory (USA) with this technology. Sony's 4K may prove popular in larger cinema venues, competing with Christie, Barco and NEC's top-end projectors, and Sony may also look at related imaging markets for its deployment. In a positive sign for the company, US exhibitor Muvico Entertainment has just announced the world's first all-4K multiplex site, an 18-screen site in Chicago.

SERVERS

Numbers for d-cinema servers are more difficult to quantify as the equipment is more easily upgraded and moved from site to site. However, it is clear that Doremi was the dominant server provider for the second year, accounting for 57.5 per cent of all known server deployments at end 2006. Second ranked was XDC, accounting for over 40 per cent of all server configurations in Europe, although during 2006 it was also offering product from Doremi as an interim JPEG2000 solution until its own brand next generation model was market ready.

Dolby and QuVis accounted for similar market shares at around 7.5 per cent of the screen base each. Dolby's leading individual market was the US (138) followed by Italy (29). The leading territory for QuVis was the UK at end 2006 due to the company's then participation in the UKFC network being deployed by Arts Alliance. However, servers are now being upgraded with Doremi units and new screens are being equipped with Doremi units.

Of the manufacturers with a small but emerging screen base, Kodak made progress in Australia and the US, whilst Qube also made inroads into the US market, although both still account for less than one per cent of the screen base. There are also 280 screens where no server model was identified.

FACILITATORS

There are now a number of d-cinema networks operated by third-party players. These players are given various names, but essentially they are in charge of signing up clients, installing d-screens and digital releases. At end 2006 there were four leading operators in the world. AccessIT leads the way with 1,695 d-screens, partly stealing a march on other US facilitators due to its strategy of not setting up a beta-test but rather commencing roll-out and installing new equipment at a later date if need be. European facilitator XDC is also an early starter, equipping 212 d-screens as at end 2006 across Europe. Third largest by number of screens, and testament to its work on the UK's DSN project is Arts Alliance Digital Cinema, which has 126 screens.

Following its successful deployment of screens for 3D in the US and Mexico, Dolby also continued its limited roll-out of 3D related screens in several territories and now stands at 123 screens. As these numbers were at the end of 2006, each facilitator has progressed now, with AccessIT passing 2,000 installations as at first quarter 2007. All others, of which Screen Digest has identified 11, numbered a cumulative total of 308 d-screens. This includes China Film, which stalled its roll-out during 2006 but has now confirmed its future strategy and chosen Barco and GDC for its further development.

Major digital screen networks end 2006

network	territory	screens
AccessIT	USA	1,695
XDC	Europe	212
AADC	UK	126
Dolby	USA	123
CFG	China	92
Dong Young	Korea	43
Dadi Digial Cinema	China	32
Technicolor	USA	28
Stellar Film	China	27
DCL	Ireland	26
AccessIT*	USA	25
T-Joy	Japan	17
NORDIC	Norway	10
T-Systems	Europe	5
Microspace	Canada	3

Notes
Technicolor Digital Cinema screens not included here as currently still operating as a beta test (not commercial)
*as per earlier deployment schemes in 2002

Source: Screen Digest

Leading digital exhibitors end 2006

	territory	screens
Carmike	USA	1,200
Rave Motion Pictures	USA	280
UltraStar Cinemas	USA	118
China Film Group Corporation	China	88
Cineworld	UK	51
Emagine	USA	46
Megabox	Korea	44
AMC	USA	42
Galaxy Theatres	USA	39
Regal	USA	38
National Amusements	USA	33
Dadi Digital Cinema Circuit	China	32
Kinepolis	Europe	30
Utopolis	Europe	30
T-Joy	Japan	27

Source: Screen Digest

MARKET PROFILES

Proportion of screens converted to digital **0.0%**

EUROPE: VIVE LA DIFFÉRENCE

While the US moves ahead with its industrial scale of d-cinema roll-out, some parts of the continent of Europe have come to a near halt in its roll-out. On the positive side, the slowdown is a necessary period of reflection as to the models that will work in providing a low-cost successful roll-out. On the negative side, this discussion could have taken place before but we are where we are.

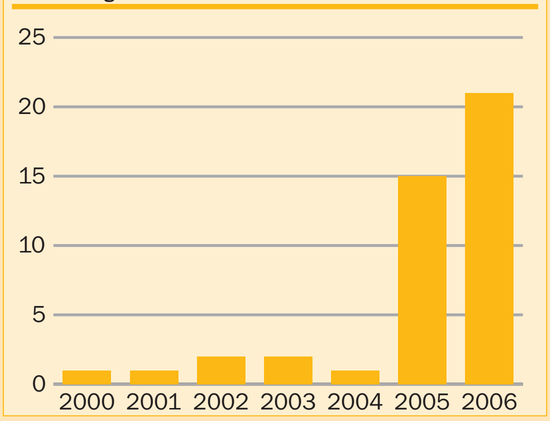
The first question that does not seem to be being addressed is the role of European regulatory and funding organisations in the d-cinema roll-out. The European Commission has so far taken little public interest in this topic, although some of the individual programmes funded by them are very active in this area. The European Digital Cinema Forum (EDCF) has been active in looking at business models, technical issues and other key questions.

However, it does appear that the issue of digital cinema is going to be resolved territory by territory (see territory updates below), with the national agencies often taking the lead in setting the agenda and pace of adoption. Therefore, it could now be argued that there is little point in a Europe-wide discussion on details of roll-out. However, as the issues will be largely the same facing most European territories (even though the weight of that issue will change in different markets), it is worth the continent sharing any information it builds up, and this may come through the offices of the EDCF.

Austria

3.6%

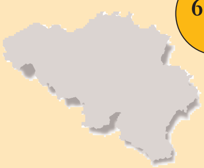
Austria is relatively advanced in digitising its cinema base, most screens being digitised so far by XDC. The most active local player is Cineplexx, owned by local major Constantin. Cineplexx went digital at several sites in late 2005, and began showing major films in digital format from 2005, including 3D movies at the site in Vienna. Another high-profile digital convert is UCI Kinowelt site in Vienna—using a Kinoton projection system—whose three digital screens were installed and managed by T-Systems.



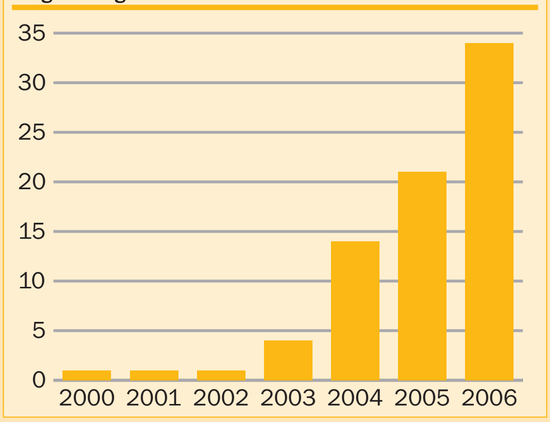
Austria: digital cinema screens

Belgium

6.5%



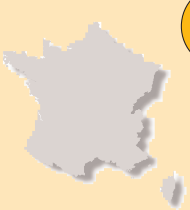
With exhibitors Kinepolis and Luxembourg-based group Utopia operating in the territory, Belgium is one of the most advanced digital cinema areas of Europe. Kinepolis aims to complete digitisation of its entire Belgian circuit of 130 screens by end 2007, partnered by Technicolor for installation. The deployment marked the first national conversion of a cinema circuit in Europe. However, other players are active such as Metropolis. Kinepolis is also taking an active interest in testing alternative content uses of cinemas, such as gaming, medical imaging and DVD/TV tie-ins. Belgium is home to several key digital cinema companies such as Barco, XDC and 3D outfit Nwave.



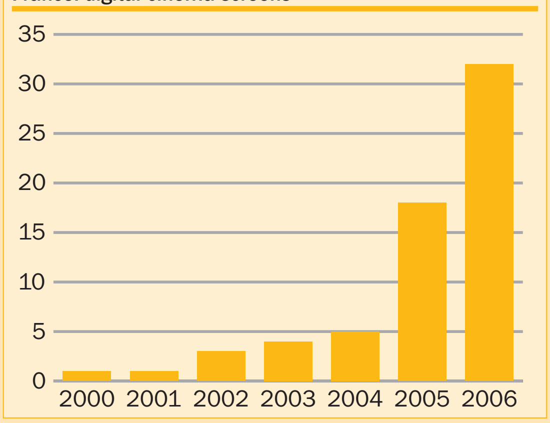
Belgium: digital cinema screens

France

0.3%



The publication of the Goudineau report in summer 2006 sparked a debate within the French cinema community, although to say that digital cinema was enthusiastically embraced would be wide of the mark. Currently, the most likely driver of growth comes from major chain Europalaces, which has eight test sites in Paris and is a positive advocate of digital cinema. In addition, a regional circuit in the south-west of the country, SAGEC, which operates around 200 screens, has also announced a study looking into its conversion to digital.



France: digital cinema screens

Source: Screen Digest

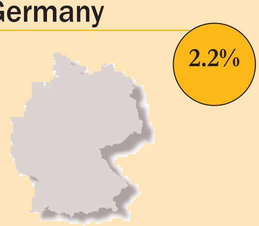
Leading European d-cinema cities end 2006		*d-screens*
London	UK	45
Luxembourg	Luxembourg	13
Nuremberg	Germany	13
Paris	France	13
Milan	Italy	9
Vienna	Austria	8
Stuttgart	Germany	7
Dublin	Ireland	7
Munich	Germany	6
Birmingham	UK	5

Source: Screen Digest

Leading European d-cinema exhibitors end 2006		*d-screens*
Cineworld	UK	51
Kinepolis	Belgium, Europe	30
Utopolis	Benelux, France	30
Odeon	UK	22
Vue Entertainment	UK	19
Multiplex Giometti	Italy	14
Cineplexx	Austria	12
Gruppo Furlan Cinecity	Italy	11
Cinecittà	Germany	10

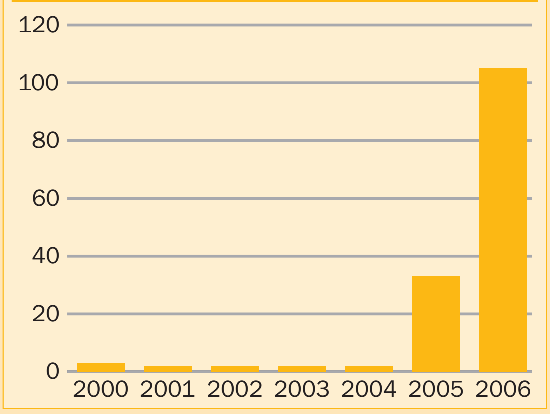
Source: Screen Digest

Germany

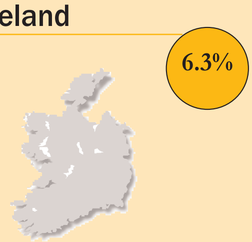


Germany is one of the most advanced digital cinema territories in Europe, with the greatest number of screens converted in a commercial fashion, mostly through the work of XDC. The German government has set up a digital cinema working group to determine the best way forward for the territory. The group is aiming to make public its initial findings in the next few months, but this is unlikely to lead to a firm plan or timetable for deployment in the immediate term. Germany is also home to the Fraunhofer Institutes, which are taking an active role in certification of d-cinema equipment and the digital workflow.

Germany: digital cinema screens

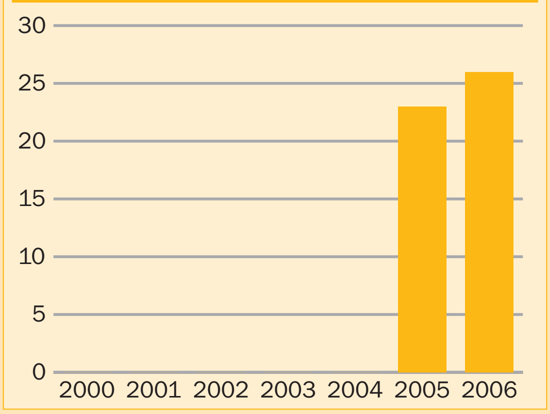


Ireland

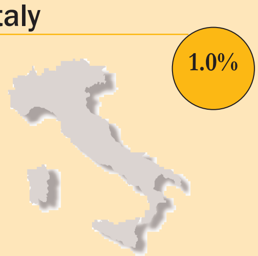


Since bringing DTS into the DCL set-up in Ireland, there is more optimism that a stalled project can get going again. DTS will upgrade servers to ensure compliance with DCI technical recommendations, including JPEG2000 and other security features. The upgrade will enable the network to receive d-cinema level movies, including those from the Hollywood studios. Previously, there have been indie releases on the DCL network, including first release *Prime* and *The Wind that Shakes the Barley*. DCL is now targeting 300 screens to be converted to D-cinema in 2007 and 200 in 2008.

Ireland: digital cinema screens

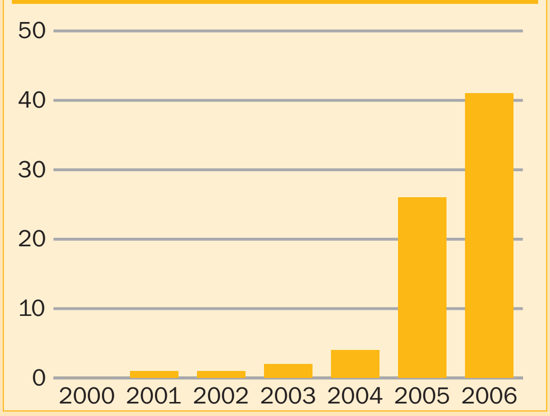


Italy



There is little significant large-scale digital activity in Italy, despite an optimistic proposal by trade body ANEC in early 2005 to begin a digital cinema installation. The government has taken little role so far, and the main progress has been by pioneering exhibitors who have paid for their own equipment. There is some market confusion about the direction to take and so far no major facilitators have managed to break into the market. Exhibitors taking the lead in installing d-screens are Multiplex Giometti and Grupo Forlan.

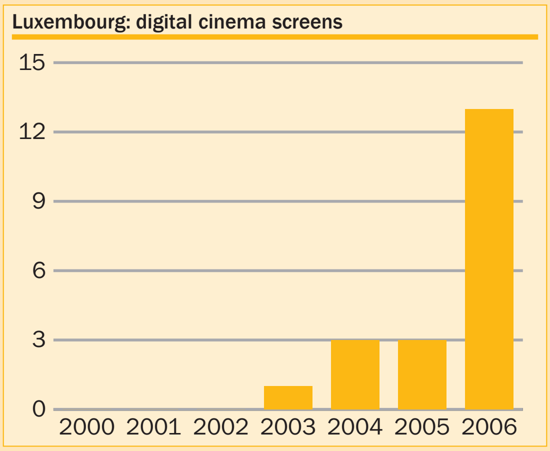
Italy: digital cinema screens



Luxembourg

54.2%

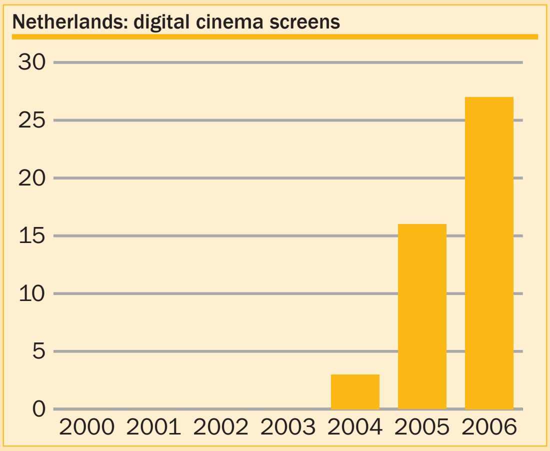
Luxembourg is a very active small territory with a high proportion of its screens digitised—one reason being the size of the country, the other that local group Utopia has been a very active proponent of digital cinema. In April 2006, Utopia converted its 10-screen Kirchberg multiplex site to all-digital, upgrading three existing d-screens and adding seven new ones. In addition, the group has also equipped art-house cinema Cine Utopia with three digital screens.



Netherlands

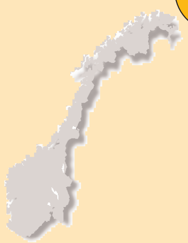
4.4%

There are 27 d-screens in place in Netherlands as at end 2006, of which 15 were installed during the year. A range of exhibitors, big and small, are testing the equipment in a small number of sites, and no momentum is yet underway to convert the whole territory. Again, Luxembourg-based Utopia has a small base of digital screens in Netherlands, adding three to its existing three during 2006. Netherlands is a founder and active member of CinemaNet Europe, a digital cinema network for documentary and local film screenings.

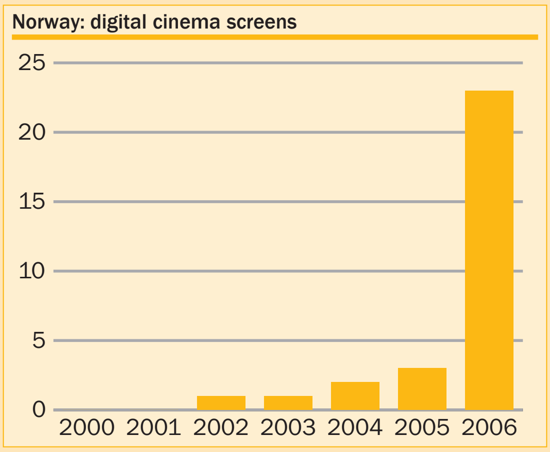


Norway

3.4%

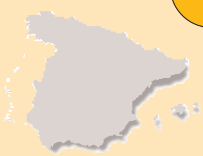


Norway has taken an industry-wide approach to the issue of converting the territory to d-cinema. All major players are financing a comprehensive study into technology, business models and financing implications and permutations of digitising the territory's screen base. There are two R&D projects taking place at present; the NORDIC project, trialling in 11 screens, and a second 10-screen trial run by UK's Arts Alliance Media in partnership with Kristiansand Digital Cinema Alliance. It is likely that the switchover will happen during 2008. Norway has form for rapid digital conversions with screen advertising company CAPA effectively switching from 35mm to digital screen advertising overnight at the beginning of 2002.

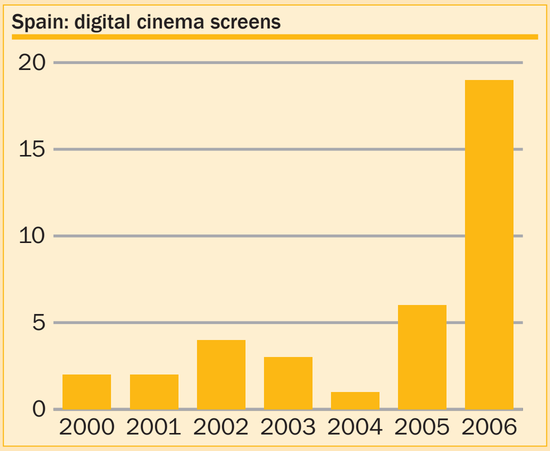


Spain

0.4%

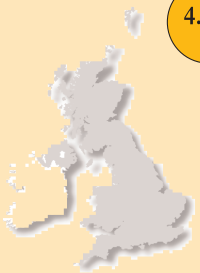


There is digital activity in Spain, but it is limited in scope up to now. However, the number of d-screens doubled in the second half of 2006 from nine to 19. A few exhibitors are conducting limited tests. Among those with d-screens in place are Multiplex Thader, Yelmo Cineplex and Abaco. Belgian group Kinepolis is also testing the digital waters in Spain but has not yet announced a roll-out in its screens outside Belgium. Spain is mostly converting with XDC so far. Circuit Yelmo has also tested gaming on the digital cinema screen. CineGames and Cine Digital are attempting to set up a low-end digital network for local films.



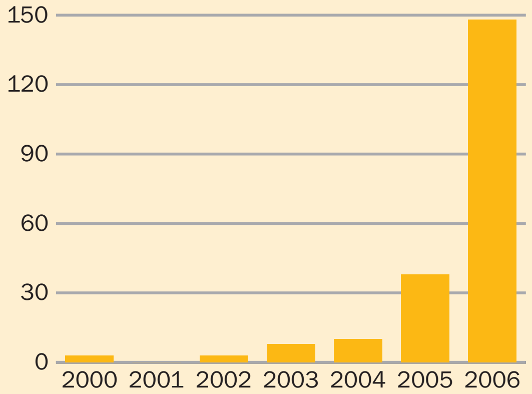
UK

4.1%



The UK is Europe's most advanced digital cinema territory due to government action in the form of the UK Film Council's Digital Screen Network (DSN) initiative. Arts Alliance, the project's facilitator, is in charge of this publicly-funded roll-out for the purpose of increasing admissions to specialised films. On the commercial front, Odeon has recently converted two multiplexes to all-digital as a test that should last around nine months. In addition, in March 2007, Empire Cinemas also converted one multiplex site to an all-digital site. There is considerable movement behind the scenes in UK, which could translate to relatively rapid roll-out when the conditions are right.

UK: digital cinema screens



Central and Eastern Europe

0.2%

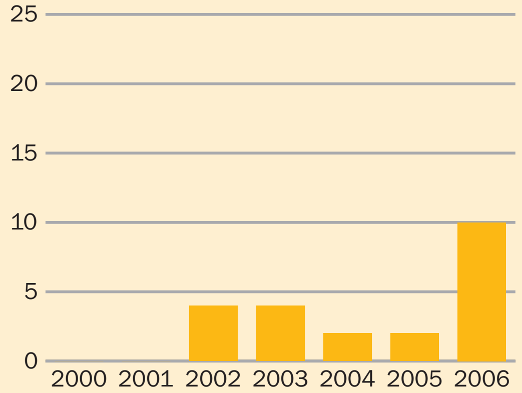
Bulgaria	1.9%
Czech Republic	0.1%
Estonia	—
Hungary	0.2%
Latvia	—
Lithuania	—
Poland	—
Romania	—
Russia	0.1%
Slovakia	—
Slovenia	—

Central and Eastern Europe

There is very limited digital cinema activity. However, some players have taken an interest, such as Cinema Park Multiplex in St Petersburg, Russia and Palace Cinema's UCI in Budapest, Hungary and its site in Prague, Czech Republic.

The most active player is Bulgarian circuit Kino Arena, which has converted two screens in each of two sites in Sofia. The body set up by the Russian government, Head Data-Computing Centre (GIVC), has recently established a digital mastering site in Russia to provide digital content. It chose Doremi DMS-2000 mastering equipment. The Digital Cinema Rollout Programme in Russia aims to be developed through 2008 to 2010.

Central/Eastern Europe: digital cinema screens



USA

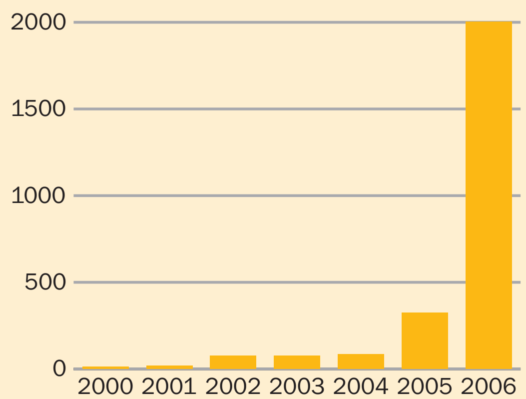
5.0%

USA

The US has well over 2,000 d-screens in place, most through the facilitator AccessIT, with Technicolor Digital Cinema (TDC) still conducting a beta test on the best equipment combinations before launching a commercial offer. TDC screens are not included in our d-screen totals. Given the nearly 40,000 screens in the US, there are likely to be other players entering the market as it develops.

However, the market is notfully defined for one major factor: the grouping of three leading exhibitors the NCM umbrella and more recently DCIP (Regal, AMC/Loews, Cinemark) is yet to pronounce on what course of action it is to take to convert its screens to digital technology. The scale of their circuit (bringing together nearly 14,000 screens) means that whatever they intend to do will have a significant effect on market development.

USA: digital cinema screens



Regional market share of deployed projectors by manufacturer

	2003	2004	2005	2006
	%	%	%	%
Europe				
Barco	78.9	84.0	43.1	30.3
Cinemeccanica	–	–	12.1	10.7
Kinoton	–	–	–	7.1
Barco sub-total	78.9	84.0	54.8	48.1
Christie	15.8	10.0	32.2	37.2
NEC	5.3	6.0	13.0	13.2
unknown	–	–	–	1.3
Sony	–	–	–	0.2

	2003	2004	2005	2006
	%	%	%	%
North America				
Barco	31.1	30.9	18.1	6.5
Christie	68.9	69.1	81.9	91.4
NEC	–	–	–	0.8
unknown	–	–	–	0.7
Sony	–	–	–	0.6
Latin America				
Barco	20.0	16.7	15.4	18.8
Christie	80.0	83.3	84.6	68.8
unknown	–	–	–	12.5

	2003	2004	2005	2006
	%	%	%	%
Asia				
Barco	24.6	55.4	57.8	62.2
Christie	53.8	35.0	35.7	29.1
NEC	21.5	9.6	6.5	4.2
unknown	–	–	–	3.7
Sony	–	–	–	0.7
Australasia				
Barco	33.3	33.3	66.7	64.0
Christie	66.7	66.7	33.3	36.0
Africa				
Christie	–	–	100.0	25.0
Barco	–	–	–	75.0

Number of films released in high-end digital format 2006	studio	non-studio	total
USA	87	14	101
UK	6	50	56
Germany	8	9	17
France	6	5	11
Belgium	4	5	9
Luxembourg	3	5	8
Austria	7	1	8
Norway*	5	2	7
NB. Figures may be partial in some cases			
*not yet a commercial roll-out			
No data available for China			

Source: Screen Digest

Widest high-end digital releases 2006	territories
Mission Impossible: 3	11
Poseidon	9
Pirates of the Carribean: Dead Man's Chest	8
Superman Returns	7
Over the Hedge	6
Cars	6
The Departed	6
Monster House	5
Happy Feet	5
Arthur et les Minimoys	3
NB. Figures may be partial	

Source: Screen Digest

DIGITAL CONTENT

We have identified 183 titles that were screened digitally during 2006. It is becoming difficult in some territories to follow all releases (especially in China, which we have not included in the calculations)—in itself is an indication of how far the market has come. The big jump in digital releases, not surprisingly, is in the US as AccessIT screens are installed and now that the studios have signed up to provide content. There were 101 movies released in digital format in 2006 in the US (102 if you count *Monster House* 2D and 3D separately), of which 87 were from the US studios. This compares with 27 studio titles in 2005.

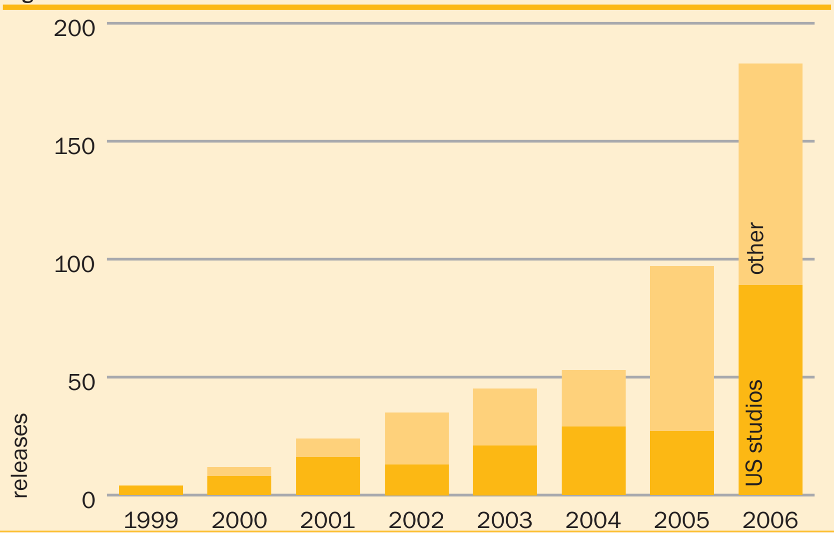
Given that studios and their subsidiaries release around 200 films in a given year, around half of all studio titles are now released in digital format. Likewise, around half of all digital release in the world, are studio titles, compared with just over a quarter in 2005.

The remaining titles were released across the world, the majority of them local titles. The US studios are sticking to their desire to release movies digitally outside the US only if the technological and market conditions are right. The largest single number of titles released in high-end digital format outside of the USA occurred in the UK, where an estimated 56 titles were distributed through the Arts Alliance-installed UK Film Council Digital Screen Network, of which only six were studio titles (unsurprisingly, as the network is established to promote specialised film). Outside of these two territories, Germany released an estimated 17 titles in digital, 11 in France, and nine in Belgium. The widest digital release we tracked was *Mission Impossible: 3*, which went out across 11 territories.

Leading territories for digital 3D screens end 2006	screens
USA	202
South Korea	17
Australia	15
UK	5
Mexico	5
total	258

Source: Screen Digest

Digital feature film releases



Source: Screen Digest

3D

The prospect of digital 3D is a major catalyst for the deployment of d-cinema systems worldwide. The format has fared well with cinemagoers (because it offers a more immersive experience and one that is exclusive to the big screen), which in turn has driven interest and investment in the sector. On average, 3D screens have outperformed their 2D counterparts by 2.5-3 times at the box office. It has also opened up a more flexible pricing structure where a premium can be applied per ticket.

The number of 3D capable systems more than doubled to hit 258 worldwide at end 2006—up from the fledgling base of 98 3D screens in 2005, of which 78 per cent were located in the US market. The key driver has been the early availability of content, averaging two releases a year. The number of configured screens is still relatively minor (around 700 by first quarter 2007), and not yet on a scale large enough to justify release of a major title in 3D only, for which a minimum 1,500-2,000 screens has been touted. The number of screens is expected to hit the 1,000 screen benchmark by end 2007.

Driving the momentum are new film projects that have been produced especially for the 3D genre, compared with existing titles converted/rendered from an existing 2D base, although the latter have been essential to kick-start the market. Major studios, including Disney and DreamWorks Animation, have pledged to produce content especially for 3D. Other pure digital 3D titles lined up are *Beowulf* (2007), *Journey 3D* (2008), and James Cameron's *Avatar* (2009). At the independent end of the market, *Fly me to the Moon* (2008) is an animation feature from Belgian company Nwave.

RealD is the leading provider of Digital 3D cinema equipment, accounting for the vast majority of screens. Its system is based on passive circular polarisation and lightweight glasses. Dolby is also testing a proprietary system using wavelength triplet technology, which precludes the use of a silver screen, as does any system with active eyewear.