



## **One Studio Perspective on the Digital Cinema Transition**

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**Wade Hanniball  
VP Cinema Technology  
Universal Pictures**

Good morning, everyone! Thank you, HPA, for the opportunity to provide a few thoughts regarding Universal's views on the digital cinema transition.

My name is Wade Hanniball and I have responsibilities for digital cinema implementation at Universal.



Universal has been pursuing digital cinema for many years. Since early experiments with “Mystery Men”, “Jurassic Park III”, “Johnny English”, “Van Helsing” and “Serenity”, we’ve been stress-testing the technical issues and business implications of d-cinema.

Our approach is one based on practicality and reasonableness, with realistic expectations.

Universal has been actively distributing digital cinema releases for the past two years. And what a long way the industry has come in those two years!

But even if the technical challenges of d-cinema are being addressed, why convert an entire, well-established industry from film to digital? What’s our business case for doing so?

## Improving the Business

- **Key Tenets:**
  - Studios Save Money (*eventually!*)
  - Exhibitors Enhance Operations
  - Audiences Enjoy Improved Quality



Bluntly (and not surprisingly), it's the money. Or rather it's the distribution savings that the studio can realize *in the long-term*. I emphasize *in the long-term*. While there are savings to be realized, there are also additional costs, which, if not managed properly, can threaten those savings.

There are *added* costs of doing business during the d-cinema transition period because we are running two complex systems in parallel - film and digital - not immediately replacing one with the other. This transition period is commonly referred to as "the ugly years". We're in 'em!

So d-cinema is a long-term strategy that demands discipline and no short-term expediencies. It is an initiative to help maintain theatrical exhibition as a viable market, competing successfully for audiences' entertainment dollars.

Contrary to some opinions, exhibitors gain too from the conversion, with a modernization and computerization of their operations, access to new and different forms of programming, and other efficiencies, some of which probably haven't even presented themselves yet.

And we know that the movie-going public enjoys markedly improved image and sound quality presentations.

## Operations

- Domestic Releases
- International Releases
- Trailers
- Infrastructure Changes
  - Post Production
  - Booking & Print Control Systems
  - Training



Operationally, 2006 was the year Universal learned to *crawl* by starting to release titles digitally in the U.S. 2007 was the year we began to *walk* (slowly at first), releasing more titles as deployments, particularly that of AccessIT, began to ramp up available screen counts. And we began some international releases as well, primarily to beta test sites and non-virtual print fee screens.

All the while, our creative marketing departments have had to add trailer DCP deliverables to their workload.

There are significant workflow and infrastructure challenges to understand, accommodate and implement, particularly, as you well know, in the area of post production.

Additionally, Universal has had to expend considerable energy and expense to adapt and improve booking and print control systems to be d-cinema capable. Interfaces between these systems and distribution servicing vendors must be upgraded to handle d-cinema.

Training regimes for personnel have been implemented. The “to do” list is considerable.

I won't say that we're going to run in 2008, but we will *walk faster*. Here's a more detailed operational review of the past two years and the year ahead...

## 2006 Releases

|          |                                     |
|----------|-------------------------------------|
| 01/06/06 | MUNICH                              |
| 01/27/06 | NANNY MCPHEE                        |
| 02/10/06 | CURIOUS GEORGE                      |
| 03/24/06 | INSIDE MAN                          |
| 03/31/06 | SLITHER                             |
| 04/21/06 | AMERICAN DREAMZ                     |
| 04/28/06 | UNITED 93                           |
| 06/02/06 | THE BREAK-UP                        |
| 06/16/06 | THE FAST & THE FURIOUS: TOKYO DRIFT |
| 07/14/06 | YOU, ME AND DUPREE                  |
| 07/28/06 | MIAMI VICE                          |
| 08/18/06 | ACCEPTED                            |
| 08/25/06 | IDLEWILD                            |
| 09/15/06 | THE BLACK DAHLIA                    |
| 10/13/06 | MAN OF THE YEAR                     |
| 11/17/06 | LET'S GO TO PRISON                  |
| 12/22/06 | THE GOOD SHEPHERD                   |
| 12/25/06 | CHILDREN OF MEN                     |

Red =  
D-Cinema  
Release



This is our 2006 release schedule. Universal released eleven d-cinema titles, shown here in red, starting with “Inside Man”.

For some of the titles early in the year, DCPs were not produced, primarily due to lack of a critical mass of screens to make it worthwhile - and our contractual obligation to the AccessIT rollout was just beginning.

Later in the year, “Idlewild” was a small release, so it didn’t make sense to release digitally, again considering the number and location of deployed screens.

## 2007 Releases

|          |                                   |
|----------|-----------------------------------|
| 01/12/07 | ALPHA DOG                         |
| 01/19/07 | THE HITCHER (Rogue)               |
| 01/26/07 | SMOKIN' ACES                      |
| 02/02/07 | BECAUSE I SAID SO                 |
| 02/16/07 | BREACH                            |
| 03/16/07 | DEAD SILENCE                      |
| 03/30/07 | PEACEFUL WARRIOR                  |
| 04/20/07 | HOT FUZZ (Rogue)                  |
| 05/11/07 | GEORGIA RULE                      |
| 06/01/07 | KNOCKED UP                        |
| 06/22/07 | EVAN ALMIGHTY                     |
| 06/29/07 | EVENING (Focus)                   |
| 07/13/07 | TALK TO ME (Focus)                |
| 07/20/07 | I NOW PRONOUNCE YOU CHUCK & LARRY |
| 08/03/07 | THE BOURNE ULTIMATUM              |
| 08/24/07 | ILLEGAL TENDER                    |
| 08/24/07 | MR. BEAN'S HOLIDAY                |
| 08/29/07 | BALLS OF FURY (Rogue)             |
| 09/14/07 | EASTERN PROMISES (Focus)          |
| 09/21/07 | SYDNEY WHITE                      |
| 09/28/07 | THE KINGDOM                       |
| 09/28/07 | LUST, CAUTION (Focus)             |
| 10/12/07 | ELIZABETH: THE GOLDEN AGE         |
| 10/19/07 | RESERVATION ROAD (Focus)          |
| 11/02/07 | AMERICAN GANGSTER                 |
| 12/07/07 | ATONEMENT (Focus)                 |
| 12/21/07 | CHARLIE WILSON'S WAR              |

Red =  
D-Cinema  
Release



Here's last year's schedule. Focus and Rogue releases joined the fray. Of twenty-seven titles, twenty-two were put out digitally. Now the exceptions become interesting to examine.

With "Alpha Dog", while a digital intermediate was made, much of the DI was lost due to accidental erasure by a post production facility. No DI, no DCP, at least at that time.

With "The Hitcher", while there was a DI, the DI facility couldn't output the XYZ DCDM files in a timely fashion. No DCDM, no DCP.

With "Breach", this title was a traditional film finish. Again, no DI, no DCP.

"Peaceful Warrior" was another example of a limited release, as was "Lust, Caution", which had the additional issue of being rated "NC-17", limiting access to some theaters.

One war story: "American Gangster" deserves special mention, because it too was a traditional film-finished title, with no DI created. By the time of its release, some circuits had completely converted to digital, with no film projectors in the booth. It really needed to be released digitally, especially being such a prestigious title.

So, starting with an HD telecine master, the 709 color space was converted very closely to an XYZ DCDM. But as you can imagine, close wasn't good enough, so a painstaking cut-by-cut conform of the picture was performed under difficult scheduling limitations. The DCP was completed on time, but only just. And we learned a valuable lesson - *never do it this way again*. Next time, faced with a film-finished title, we'll essentially go through the process of making a DI by scanning the film.

## 2008 Releases

|          |  |
|----------|--|
| 01/11/08 | THE PIRATES WHO DON'T DO ANYTHING      |
| 02/08/08 | IN BRUGES (Focus)                      |
| 02/08/08 | WELCOME HOME ROSCOE JENKINS            |
| 02/14/08 | DEFINITELY, MAYBE                      |
| 03/07/08 | MISS PETTIGREW LIVES FOR A DAY (Focus) |
| 03/14/08 | DOOMSDAY                               |
| 04/04/08 | LEATHERHEADS                           |
| etc.     | FORGETTING SARAH MARSHALL              |
|          | BABY MAMA                              |
|          | THE STRANGERS (Rogue)                  |
|          | THE INCREDIBLE HULK                    |
|          | WANTED                                 |
|          | HELLBOY II: THE GOLDEN ARMY            |
|          | MAMMA MIA!                             |
|          | THE MUMMY: TOMB OF THE DRAGON EMPEROR  |
|          | WILD CHILD                             |
|          | DEATH RACE                             |
|          | THE EXPRESS                            |
|          | THE TALE OF DESPEREAUX                 |

Red =  
D-Cinema  
Release



This year, 2008, our slate will be released almost 100% digitally. (“In Bruges”, another small release, being the only known exception.)

With the Arts Alliance rollout beginning in Europe, first in France, I expect that our international digital cinema deliveries will continue to rise.

## Deployments

- **Christie-AccessIT**
- **Arts Alliance**
- **Technicolor**
  
- **Additional agreements to follow shortly...**



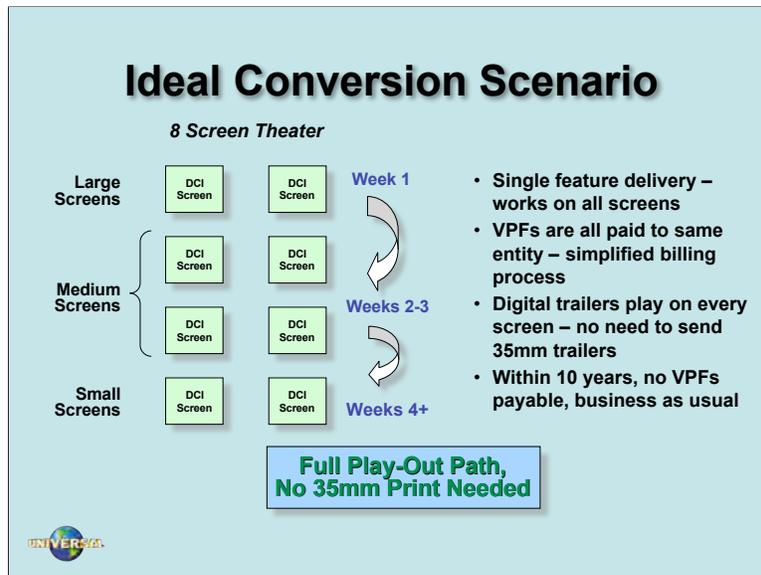
Respecting those rollout entities, as you likely know, we have agreements in place with Christie-AccessIT, Arts Alliance and Technicolor.

These non-exclusive agreements assist exhibitors with the cost of converting from film projectors to d-cinema using a virtual print fee model. Roughly speaking, instead of making a film print, some of those monies are used to assist with paying d-cinema equipment costs.

We are in active discussions with several additional rollout entities, both in the U.S. and abroad, and you can very shortly expect announcements of new VPF rollout deals from Universal. We anticipate this to be on the order of days or weeks, not months.

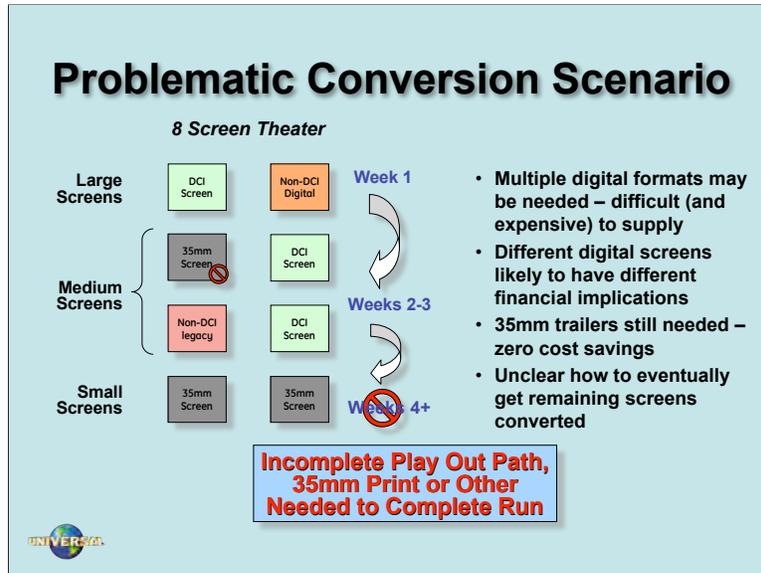
We want competition in the deployment space. Competition helps drive down costs. And no one, distributor or exhibitor alike, likes to face a single source for goods and services.

One of our key requirements in such rollout deals includes a minimum 50% conversion in a complex to start, with a clear path to 100% conversion of all screens. This is to ensure a digital play-out path for the duration of a booking, going from a large screen to a medium screen to a small screen.



Here's such a scenario at the end of the d-cinema transition period - a complete play-out path, with all screens fully converted.

Everything works, and works well, in accordance with d-cinema specifications and standards.



Here's what we must avoid as an end result - a fractious environment, with a mixture of film and various d-cinema systems in a theater complex.

Such a splintered, one-off situation could arise, particularly if exhibitors or their partners cherry-pick only a few screens to convert, leading to a chaotic deployment. Distributing into this environment will be difficult for everyone.

## Deployments

- Christie-AccessIT



On a happier note, I'm pleased to advise you that such a problematic scenario has not been the case with the most significant deployment to date, that of Christie-AccessIT.

With their kind permission, I'm allowed to publicly share with you for the first time some of the statistics we've been experiencing with their rollout.

With scant exception, all screens in the complexes converted by AccessIT are now at 100% digital deployment. The reliability is so good, and the availability of digital feature content so widespread, that some circuits in this deployment have removed many if not all of their 35mm film projectors from their booths.

## Universal 13-Month Overview

[Table Redacted]



While we've been providing DCPs for two years, these statistics show the uptime for Universal releases for the past 13 months.

As you can see, Universal alone has now had over a half-million showings on these systems, with an average reliability of 99.9%. This is truly an impressive number considering the nascent nature of d-cinema technology.

Even from the very beginning two years ago, reliability for Universal titles has never fallen below 99.34%. While statistics for film-based failures are difficult to estimate, certainly d-cinema compares very favorably to our anecdotal film failure data.

## Christie AIX 13-Month Overview

[Table Redacted]



If you look at the cumulative statistics for all screenings for all studios, the reliability is 99.92% in the past 13 months. This for a deployment approaching five million showings.

Is there room for improvement? Always, but this is a great start and goes far beyond proof-of-concept and expectations. The technology works.

## Christie AIX Missed Shows By Category

[Chart Redacted]



Even the failures are interesting to analyze. Here's a break-down of missed shows for January 2008.

Failures fall into three broad categories - the server, the projector, and the theater facility, including human error. It's usually about a third, a third and a third.

Many of the theater facility faults occur outside the realm of d-cinema, consisting of power and HVAC failures, even B-chain audio issues. So not all show failures are even directly attributable to d-cinema.

I have nothing but praise for the Christie-AccessIT deployment. Don't let anyone tell you they're not doing it right. They are. (End of unsolicited endorsement.)

## 3D

### Universal Studios Supports 3D.

(Focus Features "Coraline" opens in 3D on February 6, 2009.)

**However, there are major technical & business issues to overcome that must be addressed and not minimized.**



Finally, a word about 3D. Let me make the following clear, as my comments at ShowEast have been widely reported but sometimes misunderstood.

First, Universal Studios supports 3D. We have one 3D movie in the pipeline. Our senior management believes 3D is another drawing factor, getting audiences out of their homes and into the theater.

That said, there are clearly major technical and business issues to address. The industry owes it to itself to put aside the hype and sales pitches and confront these matters head-on in a balanced way, weighing and addressing equally the opportunities and challenges of the 3D experience. We must balance the short-term *competitive* advantages of 3D against the long-term *industry* advantages of a full-scale d-cinema conversion.

For instance, let's agree to stop saying that 3D will be the savior of the theatrical business. The theatrical business is a robust industry with cyclical ups and downs, but fundamentally isn't in need of "saving". Theaters need to compete on the basis of long-term quality of service, not on the temporary uplift that 3D may grant.

Let's agree, too, to stop saying that 3D can't be pirated. Movie thieves are very resourceful, and while it may be difficult to steal and recreate the 3D event, 3D can and will be camcordered just like every other theatrical release, if only in 2D.

There is also a crying need for 3D standardization. 3D doesn't save the studio any money and the lack of standards is a distinct barrier to adoption. Progress is being made, but more must be done.

Let's not let 3D distract us and take focus away from the advantages of a 100% digital cinema conversion. It's time to roll up our sleeves and have a healthy debate. I look forward to the conversation.



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Just one studio's perspective. Thank you for your time and attention.