

DFT Digital Film Technology Showcases SCANITY Archive at IBC2011

As facilities continue to expand and supplement their services to address the film archive & restoration market, their requirements include a film scanner that handles film with the utmost care. DFT meets this demand with SCANITY and its continuous transport without pins and sprockets, roller gate, LED illumination and optical perforation detection. SCANITY has a number of new features that specifically address the Film Archive market, including: variable scaling, film shrinkage measurement, vertical over-scanning, individual light & density range control, as well as variable aperture correction.



DFT at NAB 2011 Las Vegas

Variable Scaling – SCANITY incorporates a real-time scaler that resizes the image and compensates for any film shrinkage. The scaler provides 4096 horizontal pixels from an ACA format and the horizontal and vertical flip function fixes incorrectly laced film.

Film shrinkage measurement / display – This feature continuously displays the percentage of film shrinkage. Shrunken film is scanned without adjustments or the need to modify film gates. SCANITY supports shrinkage up to 4%. **Vertical Over-Scanning** - Splices on films can have

wide tolerances causing the frame bar to jump in and out of the visible image area at scene changes. SCANITY scans more of the picture height and shows parts of the previous and following frame allowing the image area to be selected in post production without losing any content. SCANITY's advantage compared to an optical zoom is that the scanned file size increases as the image area (height and width) becomes larger, therefore the resolution (lines per inch / pixel pitch) is kept constantly high. This allows users to maintain image sharpness throughout the post production process - even after cropping and repositioning. The image height is 25% larger than the original film frame, equally dispersed on the top and bottom of the frame.

Individual Light & Density Range Control - Colors on positive and negative film may fade due to age and inappropriate storage or use. As long as there is a little remaining color information left in the color layers it can be recovered. SCANITY offers a wide range and headroom of light as well as the tools to control the intensity of each color of the LED illumination. SCANITY controls adjustable density ranges letting users get the very best out of faded films. **Variable Aperture Correction** – This feature compensates for unavoidable losses that occur in an optical scanning system. A neutral aperture correction means the images are seen exactly as they are on the film. An expanded algorithm aids the operator to over or under compensate to make the image sharper or softer. This tool adjusts the look of different film stocks, reduces the appearance of the film grain or applies a certain look.

The enhancements and features being shown at IBC meet the requirements for post production facilities expanding into serving the archive & restoration as well as traditional archive facilities.

DFT will be at IBC 2011, 7.E21.

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OMNIMAGO uses its SCANITY Film Scanner to Support The German Film Institute and its New Permanent Film History Exhibition

Peter Fries, Managing Director of OMNIMAGO, German-based service provider for archive and restoration comments on new department "Preservation and Restoration".

OMNIMAGO recently founded its new "Department of preservation and restoration." How does this fit into your company's overall philosophy?

It fits very well. OMNIMAGO was founded almost 30 years ago and since the very beginning we have dedicated ourselves to the careful handling and preservation of archival material.

Movies are content with great cultural and social importance. We have a mission to safe keep and restore our film heritage and support archive facilities in their goal to make the films available to the public. This is also the reason why we are member of the IFTA - International Association of Broadcasting Archives and have very strong connections to the FIAF - International Federation of Film Archives.

Our new department for archiving and restoration allows us to support and service archive facilities in all aspects of their work. Our purchase of a SCANITY Archive film scanner from DFT Digital Film Technology is a symbol of our efforts to stay on top of technological advancements as well as offer our customers high quality services.

Our first project in our new archive

department is currently underway, where we scanned an 1896 film on SCANITY Archive. This film is now going through a complete digital restoration process and will subsequently be printed back to film.

Which significance was the purchase of SCANITY Archive for your organization?

The purchase of SCANITY Archive was a logical next step for us in growing our business. We are now able to offer film archives a full-service workflow solution. SCANITY handles our clients' film with the utmost of care and is therefore 100% in accordance with our standards.

We consider ourselves a forward thinking organization, so our know-how and technological equipment show this without ever compromising quality.

You have scanned film sequences for the permanent exhibition at the German Film Institute. Which significance does this exhibition have for you?

The German Film Institute's new permanent exhibit familiarizes its visitors with film in a way that goes beyond regular viewing and listening habits. The exhibit builds a bridge between historical films, e.g. "Das Kabinett des Dr. Caligari" (1920) and new features such as "Inception" (2010).

We hope supporting The German Film Institute in its aim to build awareness

about the relevance of films and how they contribute to culture and history. As well as provide future generations with an understanding about the importance of archiving.

What projects did OMNIMAGO work on for this exhibit?

Using SCANITY, we scanned the film sequences for the collage in the "Film Visuals" part of the exhibit. We scanned copies on acetate in HD and converted them to NTSC using the Snell Alchemist. The film sequences were all historical milestones and were scattered through 70 film rolls in a large variety of image formats. SCANITY helped us immensely due in part to its option to move forward to the selected scenes on the film reels. The material itself was in good condition, some of the images were dirty and scratched, but there were no noteworthy difficulties and they could be fixed appropriately.

www.omnimago.tv

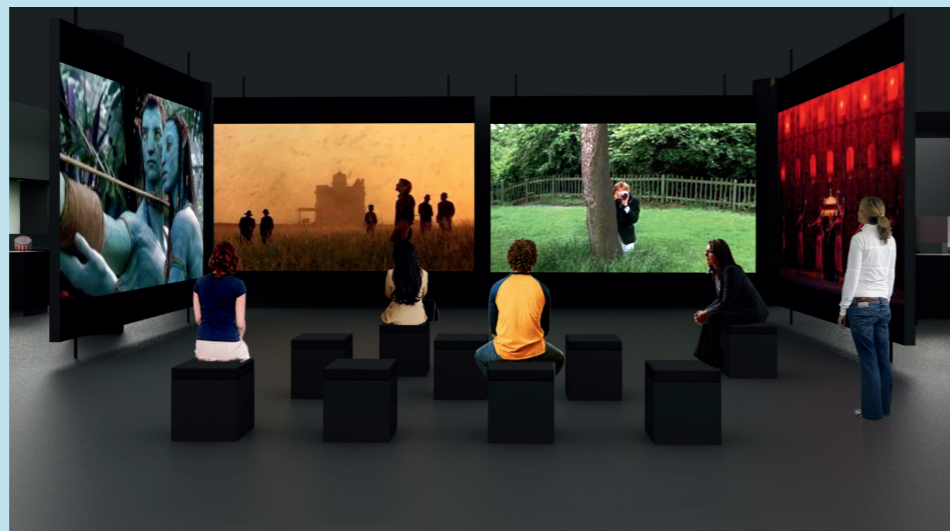


Peter Fries, Managing Director of OMNIMAGO

German Film Institute and Film Museum Reopened

After months of extensive remodeling, reconstruction and modernization, the German Film Institute and Film Museum (Deutsches Filminstitut/DIF - Deutsches Filmmuseum) in Frankfurt reopened its doors to the public in August, 2011. At the heart of the DIF is a new permanent exhibition „From Caligari to Inception“ that includes a part on Film Visuals and a second part on Film Narrative. Visitors are invited to explore the Film Visuals segment and learn how instruments throughout the ages helped manipulate images to give the illusion of movement. The Film Narrative part exhibits the medium of film to tell a story.

For more information visit www.deutsches-filminstitut.de/filmmuseum



Filmroom of German Film Institute

PrestoCentre: A new place to go for sharing expertise about AV digitisation

Audiovisual recordings preserve the history of the 20th and 21st Centuries so that events and personalities can be seen and heard. Through enabling access to the past and present in the future, these materials of image and sound offer a dynamic expression of much of the world's cultural heritage. Unlike documents which may last for centuries or even millennia, these audiovisual materials have a life expectancy measured at best in decades.

In the shift to digital, audiovisual content collections are transforming from archives of analogue materials to very large stores of digital data. As time-based digital media and their related metadata are edited, re-used and re-formatted in a continuously evolving environment, preservation of this content becomes not only about procuring the safety of analogue materials, but preserving their digitally-migrated descendants, and the increasing number of 'born-digital' recordings.

The processes and technologies for digitising analogue holdings are becoming increasingly well-known. Although the task is far from complete, about 10 million hours of European audiovisual content has already been digitised. As archives follow the continuously evolving technological production processes of content creators into the digital domain, they need to confront the issues of digital preservation, with urgency. It is clear, that whatever resources are available for AV digitisation and preservation should be applied and used in the most efficient way possible.

Improving the efficiency of the overall sector is one of the missions of PrestoCentre, a new organisation for those concerned with AV digitisation and digital preservation. Launched in March of 2011, PrestoCentre is a non-profit organisation serving AV media content producers and custodians working to preserve their digital film, television and radio content, helping them make the most of their digital archives through advocacy, information creation, knowledge leveraging, and valuable practical workshops.

The result of more than ten years of

work by several projects funded by the European Union (including Presto, PrestoSpace, and PrestoPrime), and based on the insight that effectively addressing all the problems of AV digitisation requires an enormous range of expertise - more than most libraries, museums, and archives have internally - PrestoCentre functions to bring together stakeholders of the AV domain to share, work and learn. It does this by fostering a community that exchanges experiences, knowledge, expertise and practical tools. Members of PrestoCentre include



Launch of PrestoCentre

broadcast, sound and film archives; national libraries and national archives; regional, subject-specific, small, mid-size, university, and corporate archives; creators of AV materials; independent producers; providers and suppliers; funders; standards efforts, and other organisations concerned with archiving.

As a member-driven and member-supported organization that operates through a mix of online and offline services, PrestoCentre provides a wide range of benefits to these organizations including: a vast library of downloadable documents, an international calendar of upcoming events, discounts on trainings, information about funding opportunities, and much more over the next months as applied tools for preservation planning are added, member-organizations and companies will be able to create and publicize their expertise through profiles, and an active discussion network gets up and running.

Today, PrestoCentre's governing board includes representatives from the British Broadcasting Corporation (UK); l'Institut National de l'Audiovisuel (France);

Netherlands Institute for Sound and Vision/Instituut voor Beeld en Geluid (Netherlands); Österreichischer Rundfunk (Austria); and Radiotelevisione Italiana (Italy). These organisations provide a basic support for PrestoCentre and its activities, and are dedicated to R&D for audiovisual digital preservation, sharing their results through PrestoCentre.

Expanding knowledge and skills through training

A major part of PrestoCentre's work involves training. The organizations involved in PrestoCentre participated in conducting training sessions at last year's Association of Moving Image Archivists (AMIA) meeting, and in September, 2011 PrestoCentre will hold a week-long training in 'Long-Term Audiovisual Digital Preservation: Strategy, Planning & Tools' as part of its Professional Development Training Series. Based on the experiences of some of the largest audiovisual and broadcast archives in Europe, this training will give a comprehensive account of the tools and technologies

available for the digital preservation of, and access to, AV content, outlining strategies, workflows and architecture planning, and includes a number of onsite visits to relevant facilities engaged in mass digitisation. Participants will include large AV archives, service providers and technology providers.

For more information, please see <http://training2011.prestocentre.eu>.

A walk through film digitisation

Another way of effectively addressing the importance of sharing knowledge and learning from each other, is to document the engineering work already done by early adopters of new technology, and thereby save other institutions from replicating the work - and inevitable errors - involved in digitisation.

One digitisation process that is relatively far along at some institutions, but just starting at others, is film digitisation. By all accounts, developing effective workflows for mass digitisation of film is a very hard problem.

Mistakes can be expensive; as one engineer at a major US institution put it, 'you can spend \$10 million just to find out you're doing it wrong'. And yet many of the common problems are obvious in retrospect.

PrestoCentre is therefore gathering information from leading institutions that have developed effective film digitisation workflows. This information is presented on the PrestoCentre site as both resource materials in our library, and will be culled-together and contextualised through a 'walk-through'. The series of walk-throughs are being designed as a site-map tool, reader's guide and online tutorial hybrid, containing a mix of theoretical discussion, conference presentations, instructional video, standards evaluations, practical tools and engineering diagrams. As something akin to an interactive flowchart, each walk-through will have a main topic, film digitisation for example, and will show a series of connected steps/issues/points as sub-topic 'slides' or 'frames' that when seen together offer an over-all view of the walk-through. When an individual 'frame' is selected, the walk-through zooms in on the specific sub-topic to reveal contextual information, and offers related documents, tools and videos etc. available on different parts of PrestoCentre. As such, these guides simultaneously walk the user through a specific topic, such as film digitisation, while also offering a

guided path through PrestoCentre by bringing together diverse and relevant resources around a particular topic from around the site.

Financial strategizing, and sharing resources about resources

If there are any AV archives in the world who feel they are funded sufficiently to do all they wish, we've never heard of them.

Fundraising, and intelligently using funds available, are therefore critical concerns for all AV institutions. But again, there is no need to re-invent, at great cost, what has been developed elsewhere. A particular interest of PrestoCentre is in improving collaboration between the public and private sectors, to the benefit of both.

PrestoCentre is also designing a walk-through of financial resources that addresses theoretical issues (for example, how to make effective arguments about sustainability), practical issues (how to estimate costs for different operations), and actionable news (for example, conferences, events, and economic opportunities).

Focusing in on the future

Over the next one and half years, PrestoCentre will evolve from its current status, as part of the EU-funded PrestoPrime project, to a freestanding

membership organisation. For the remainder of 2011, organizations, institutions, companies and associations within the AV domain are offered free membership to PrestoCentre.

For libraries, museums, archives, and vendors engaged in the digitisation of AV materials, PrestoCentre offers a mechanism to share what's been learned, and to accelerate the progress towards a world with a much richer and more accessible record of our cultural heritage.

To become a member of the PrestoCentre community now, keep up with our activities, and make use of member-only benefits, please visit www.prestocentre.eu/membership for more information and registration.

And keep an eye to www.prestocentre.eu/ over the coming months as we continue to develop and implement new services.



Jeff Ubois

Clive Hodge, BBC: "SCANITY is delivering everything it promised!"

Clive Hodge, Head of Digital Media Services BBC Studios and Post Production, talks about his work and experiences with archiving and restoration workflows and challenges.

What were your main reasons for purchasing SCANITY? What features are most important to you and why?

The key features that led us to the decision to purchase SCANITY were:

1. Speed of scanning
2. Infrared dirt concealment
3. Ease of operation

Quality of build and our previous experience with the DFT products (Spirit and Shadow) and team.

How does SCANITY save time and resources and what other reasons resulted in your purchase of SCANITY with regards to efficiency and workflow? Can you quantify the advantages?

SCANITY's high scanning speeds enable us to scan high volumes of material to feed multiple restoration workstations and output devices. Particularly when handling A/B roll negative, this speed coupled with the remarkable ability of SCANITY to handle physical splices with minimal disturbance provides us with a highly cost-effective A/B roll negative restoration path.

Who on your team will work on SCANITY, and what is their background? Please describe a typical workflow that you will start with.

Our Telecine Operators are trained to recognize and handle all types of film material. They have many years of experience working with 35, 16, 8 and even 9.5mm film from a variety of sources. Material for new projects is initially checked for physical defects on a film bench, ultrasonically cleaned, scanned using SCANITY to our high-speed storage pending transfer to the next stage

of the workflow.

What systems did you use before purchasing SCANITY?

Previously, our Restoration workflow was based around a digital video workflow starting with either Spirit or Shadow and using real time color.

What is the main focus of your work? How does SCANITY help you achieve your goals?

We concentrate on Restoration and Archive work. The ability of SCANITY to handle badly shrunk film better than any of our physical sprocket driven telecines, is of particular interest to our clients.

What are the next projects you are planning to complete using SCANITY? What does your workflow look like in archiving and why are you working this particular way?

We are currently working on a number of

television drama series shot on 16mm in the seventies and eighties for release on DVD, BluRay or for HDTV use. The ability of SCANITY to get the absolute maximum out of the 16mm camera original negative is enabling us to get acceptable HD from 30 year old 16mm material. One particular series has really tested SCANITY because the consistency of material, even on a single roll of negative, is very poor. Despite this SCANITY handles the variability very well providing us with the DPX files to correct and restore downstream.

What kind of technical equipment do you have in your studios?



Sheona Henderson, Telecine Operator

For our traditional SD and HD video based workflows we operate Spirit, Shadow, a classic Cintel MK3 with Pogle grading, and Image Systems Digital Vision DVNR real-time grain and dirt reduction systems onto Digibeta and HDCam SR decks. In building our new file based workflow systems we selected a DFT SCANITY film scanner, an Image Systems Digital Vision Nucoda Film Master, HSArts Dustbuster, The Pixel Farm PF Clean, as well as Cinnafilm's Dark Energy applications. Our gateway between the video and file domains, and file base export tools are based around DVS Clipster and Pronto. Our file systems are interfaced with VS Flex and Ultra SANs.

What is it like to work with the SCANITY?

The beauty of SCANITY is its ability to produce excellent results from all forms of film in all sorts of conditions with very little intervention by the operator. We have examples of film that would not run on our other telecines yet SCANITY handled them without any issues. (Sheona Henderson, Telecine Operator)

SCANITY produces excellent results from all forms of film

How did the SCANITY meet your expectations?

SCANITY is delivering everything it promised. The IR concealment option has significantly reduced the degree of downstream dust busting we have to undertake and the images are as good as we've seen in HD and 2K. This coupled with the really impressive speed of scanning means we can expand our restoration capacity significantly with minimal further investment. Finally the potential of moving to 4K scanning is an important future proofing feature as and when our customers require it.

Could you tell us in a few words what BBC Studios and Post Production is doing?

BBC Studios and Post Production is the largest television studios and post facilities provider in the UK, offering world-class creative and technical production solutions to the media and archive industry. Its Digital Media Services division provides extensive re-mastering, restoration and digital archiving solutions to preserve, restore, and digitise archive collections. We are highly experienced in all forms of transfer work, grading and digital restoration. Additionally we have a proven track record in handling large scale valuable archive libraries for many customers.

www.bbcstudiosandpostproduction.com



Clive Hodge, Head of Digital Media Services BBC Studios and Post Production

DFT organizes Archive Symposium at BBC in London

Join us in London, United Kingdom for an Archive & Restoration Symposium, You will have the opportunity to take part in panels and discussions on a variety of topics related to the archive & restoration market.

The symposium, "Large Scale Digitization of Cultural Heritage - Challenges and Technical Developments," will address the current issues that Archive facilities are facing, and the technical challenges that manufacturers are solving. The Symposium includes: Presentations on challenges that Archive facilities faced in the past and are facing today,



Solutions for digitization, technical developments in archive solutions, workshops.

When: October 13, 2011, 11:00 AM - 5:30 PM; October 14, 2011, 9:00 AM - 4:00 PM

Where: BBC Television Centre, Wood Lane, White City, London, W12 7RJ, United Kingdom

Who should attend: Those interested in sharing in the discussion of archive and restoration. Those interested in entering the archive market, and those interested in sharing their experiences.

More information at www.dft-film.com/archive/symposium.php