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IP and Europeana Space Pilots: Case Studies

The Dance Pilot and Hackathon

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Dance

The aim of the E-Space Dance pilot was to create a general framework for working with dance content and the metadata accessible through Europeana, and to enable the production of two innovative models of content reuse: one for research purposes and one for leisure.

Two applications were developed based on this framework:

- DANCESPACES for leisure, teaching and learning; to share and explore dance content;
- DANCEPRO for professionals and dance researchers; for multi-modal annotation of dance in real time.

The content of the pilot was drawn from the regional, national and private archival collections of partners and from Europeana. This content embraced contemporary dance, classical ballet and other theatrical dance forms, as well as social and popular dance, folk, national and indigenous dance forms.

The Dance Pilot and Hackathon

Motion in action. Dance workshop at Coventry University, Courtesy of Coventry University

Introducing the Dance Pilot and its Approach to Intellectual Property

The E-Space Dance pilot, led by Coventry University in collaboration with IN2 (an Edinburgh based media management and software publishing company) and the Universidade Nova de Lisboa (FCSH-UNL), created a general framework and taxonomy for working with dance content and metadata accessible through Europeana. The aim was to enable the

production of two innovative models for content reuse, one for research purposes and one for leisure.

The content of the pilot was drawn from the regional, national and private archival collections of partners and from Europeana. This content embraced contemporary dance, classical ballet and other theatrical dance forms, as well as social and popular dance, folk, national and indigenous dance forms. It also encompassed more ancient dance forms including those inscribed on historical artefacts (drawings, objects, paintings, texts and other kinds of inscriptions), notations and other forms of dance scores, books and other textual objects, publicity and marketing materials (posters, programmes, etc.), audio-visual recordings, photographs and digital visualisations (using motion capture and other tracking devices).

DanceSpaces

DanceSpaces[1] is a web-based application for reusing audio-visual content, by creating and sharing dance collections and narratives, and focuses on the needs of the general public, dance enthusiasts and pre-professionals (e.g. dance learners and educators, those who participate in dance as a social and/or recreational activity, dance audiences/viewers and tourists, etc.) who want to share and explore content related to a particular aspect of dance. DanceSpaces was built under the coordination of IN2 and can be accessed on any device that is connected to the Internet. The interface adapts automatically if the visitor is using a smartphone, tablet or desktop.

DancePro

DancePro[2] is an application developed as a new version of the Creation tool software, which is a video annotator, working as a digital notebook in real time for professionals during creative and compositional processes. It

1 http://www.europeana-space.eu/dancespaces/

2 http://www.europeana-space.eu/dancepro/

focuses on the needs of the researchers and dance experts (e.g. dance artists, choreographers), and offers a set of powerful tools for accessing dance content and creating extensive metadata. DancePro was built under the coordination of FCSH-UNL.

Thinking IPR

Pilot Coordinators worked with the E-Space IPR Team throughout the duration of the project, in order to obtain best practice advice on how to handle the performing arts content from a legal (IPR) perspective as they set out to develop DanceSpaces and DancePro. The pilot explored cultural heritage content and the potential for reusing this content using the Europeana database especially. They also explored the potential to stimulate market development using digital technologies in relation to dance cultural heritage content. The IPR Team advised pilot leaders directly with respect to email agreements and permissions with third party content providers. They also provided the resources and tools in the Content Space[3] of the E-Space website and the terms and conditions of use for the E-Space "protected space" for proprietary content, which exists in the E-Space Portal[4], an area protected by both legal and access rights.

Introducing the Applications/Tools

The pilot brought adaptations of existing proprietary software held by partners IN2 and FCSH-UNL to bear in solving the problem of search and discovery of dance content, and creating the two new applications DanceSpaces and DancePro.

IN2 led on the development of the DanceSpaces prototype, which is an adaptation of mymeedia, using dance content scenarios, and which allows any logged in user to become a curator, and create dance collections or

3 http://www.europeana-space.eu/content-space/

4 http://www.europeana-space.eu/technical-space/

narratives. These tools and services were from ON:meedia, the ecosystem where media lives. They include an easily customisable service-oriented platform, where diverse content-based indexing modules can be composed into workflows, and customised to store extracted metadata, annotations and other content in any repository structure. This provides an environment where repository content can be used or reused through the authoring of flexible user interfaces. The user, as a curator, can edit existing collections, or create new collections with just a few clicks, selecting a title, description, cover and display layout. They can upload their own content via an intuitive web interface, or reuse content that is already available on DanceSpaces. From the visual interface displaying all the available content, it is possible to easily assign each piece of content (e.g. image, video, text, PDF) to one or more existing collections or narratives.

For users who are looking for something particular it is possible to easily find the relevant content using a full text search (supporting also logical operators) and a number of facets (e.g. tags). If the aim is to create a narrative, the user can choose to organise with a visual drag and drop interface the elements that were selected for a given story. Changes made are immediately reflected in the published collection or narrative. The look and feel, and even the perceived functionality, of the published collections and narratives, from the perspective a non-logged in user (i.e. a DanceSpaces visitor), depends on the chosen layout. Several templates are available, and it is possible to change the aspect of an existing collection at any time. In this way, access to content is provided in the most flexible way, supporting future creative ideas.

The DancePro prototype 2.0 developed by FCSH-UNL, enables the recording and annotation of videos in real-time, or of previously recorded videos, such as Europeana content. The prototype was tested by professional choreographers, but needed to be developed for more robust use and global distribution. This could be achieved within the framework of E-Space. It allows several types and modes of annotations and is designed to support the creative and compositional processes of professional choreographers

and dancers. It is also of analytic and scholarly use. DancePro can in fact be of use in any domain where the performance of the human body is assessed.

Both tools were developed simultaneously over the course of the project. Each partner developed the back-end and front-end of the prototypes, creating user-friendly interfaces, and evaluated each tool in April and September 2015.

The technology requirements provided by IN2 through the ON:meedia platform included:

- Authoring an environment for the creation of graphical user interface templates and the publishing of (micro) content collections that include rich search functionality and provide facets for refining the search results
- Software infrastructure for the management of different pilot software components.

The technology requirements provided by FCSH-UNL included:

- Software to capture and do manual multimodal real-time annotation of video running on a PC
- Software modules for metadata linking and Europeana API query – available in the portal[5]

Partners reserved all rights in relation to these existing technologies.

IN2 and UNL-FCSH set up the tools for granular content annotation, based on the ON:meedia platform[6], Creation-tool and Knowledge-Base platform. These tools were already developed and tested in previous projects including Adaptive Channels in Europe 2010–2012 (EUTV) and Transmedia Knowledge Base for Contemporary Dance Research Project 2009–2013 (TKB). The tools were adapted and customised by the pilot in order to fit the requirements of the two scenarios. For example, content was annotated using automatic tools for video analysis and concept detection, and the

5 http://www.europeana-space.eu/technical-space/

6 http://www.clunl.edu.pt/pt/projecto.asp?id=1555&mid=157

user interfaces were used for crowd-sourced tagging and content access. Tools were extensively usability tested and evaluated at E-Space events in Portugal (May 2015) and Athens (Sep 2015) and then the menus, annotation and structure were improved and modified both backend and frontend.

Partners reserved all rights both to the background IPR in their existing pre-pilot technologies and in the technologies once adapted, improved or modified for the pilot.

Introducing the Content

The Dance pilot annotation tool captures movement. However, the dance community tends not to release this content as open content, so the pilot decided to focus on using Europeana and other open content for the hackathon. It used restricted content only for demonstration purposes, limiting the possibility for problems to arise at the business modelling and incubation stages with rights clearance for the reuse of the content.

The pilot used both open and proprietary content from multiple sources including the Europeana database and the Siobhan Davies Replay archive[7], which was ready and available to use, by agreement with the pilot, for pilot purposes only. The section below outlines in more detail the content used by the pilot and the pilot approach to IP regarding this content.

Content Sourcing for the Pilot

The Dance pilot faced the challenge of finding content on the Europeana database that was accessible and freely available for reuse. The task proved more difficult than expected. Users expect to be able to find reusable content quickly but this is not always possible on Europeana. The difficulties outlined below, raised important questions that would be further explored

7 http://www.siobhandaviesreplay.com

through the development of the Dance pilot's contribution to the E-Space Massive Open Online Course (MOOC).

The Dance pilot envisaged reusing the digital dance content available through Europeana in the following ways:

- to upload content to the pilot set-up by IN2 platform
- to reuse content for the testing of the mock-ups
- to use content at later stages e.g. usability tests
- to create content collections located on the E-Space "protected space" platform for use during the hackathon
- for an audit of dance content located on Europeana.

The Dance pilot located various single collections that were sometimes proprietary and sometimes available. It was often the case that metadata was listed with no actual access to the content. In such cases, the Dance pilot either contacted the content provider or Europeana directly, or noted the content and listed it as an identified source, with the potential to be reused, without actually reusing it. In one particular case, a Europeana collection entitled ECLAP was identified, which had a variety of still and moving images available, and in this instance, the project's technical coordinator Promoter SRL secured an agreement with the collection custodians. Most of the collections were proprietary or only offered metadata, so the Dance pilot contacted collection coordinators or Europeana directly for assistance with rights clearance. A representative from Europeana Labs offered guidance and directed the pilot towards open-access content and alternative dance collections.

The material the Dance pilot was eventually able to source would determine the future of pilot activities. Given the difficulties with Europeana content, the pilot chose to find alternative content to work with in addition to the still and moving images from Europeana. This allowed the developers to begin testing their mock ups. Without sufficient content to reuse the development and testing of the prototypes would have been difficult. In addition to trying to secure content that was readily available, it was considered that inviting

artists to collaborate with the pilot could be advantageous in helping to disseminate the project and the pilot's activities, creating partnerships with key stakeholders, and identifying artists who could potentially offer and contribute to Europeana, thus serving to enhance the cultural heritage sector with respect to dance.

In the end, the pilot drew much of its content from the ECLAP online library, as well as from the international dance community, such as freelance individual artists. Pilot leaders worked with these individual leaders in the field of dance, sourcing content from Australia, Greece, England, the US and other European countries. The content used was a mixture of openly licensed and proprietary content and, as with the Museums pilot, simple email agreements for reuse were made with content providers external to the E-Space partnership.

Below is a detailed list of the content eventually used by the pilot. The combined hours of sourcing moving content found through Europeana amounted to 65% and the combined hours from non-Europeana material was 35%.

The following content was sourced from Europeana:

- EU Screen (Beta and Project) Images and Video (Approx. 3 hours), IPR is owned by INA, free access but no reuse permissions
- Siobhan Davies Replay, Images and Video (Approx. 10+ Hours), IPR is owned by a third party: Siobhan Davies, an agreement exists to allow usage for research purposes only
- DE Film Institute, Images and Video (Approx. 2+ Hours), restricted access, rights reserved, reuse restrictions apply
- Institute National de l'Audiovisuel (INA). France Images and Video Ca. 1+ hours, restricted access, rights reserved
- The European Film Gateway Video Recordings Ca. 3+ hours, restricted access, rights reserved
- The Swiss National Library, The European Library Images and videos Ca. 3+ hours, restricted access, rights reserved

- ECLAP Images and Video Recording Ca. 5+ Hours, restricted access, rights reserved
- Memory of the Netherlands “150 Years of Advertising in the Netherlands” Reclame Arsennal Collection Images Ca. 2+ hours, restricted access, rights reserved
- OFS Records Music for dance Ca.1.5 hours, restricted access, rights reserved
- Int’l Institute of Social History Netherlan ds Images, Video Recordings Ca. 2 hours, restricted access, rights reserved

Coventry University identified the local artists and other dance practitioners listed below, who could offer non-Europeana dance content to the pilot. This content, along with the content from Europeana, helped to facilitate the development of the pilot’s prototypes.

Decoda[8] (UK), an artist led dance organisation that creates spaces for conversation and practice, and offers residencies, and curates workshop series, festivals and performance events. Decoda supported the E-Space Dance pilot by including the pilot in the Summer Dancing Festival 2014. They were also instrumental in connecting the pilot partners with freelance artists, practitioners, teachers, learners and researchers.

Remnant Dance[9] (Australia), a Perth-based collective of performing artists who offered a variety of content from numerous Perth-based artists.

Levantes Dance Theatre[10] (Greece/UK), a Greek dance theatre company who are Associate Artists of Greenwich Dance based in London.

J Squared Dance Company[11] (UK), who’s Artistic Director Jennifer Essex, also contributed to the E-Space Dance pilot by supplying content to test the pilot’s applications.

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8 http://www.decoda-uk.org

9 http://www.remnantdance.com.au

10 http://www.levantesdancetheatre.org

11 http://www.jenniferessex.com

These partnerships required the assistance of the E-Space IPR Team, who offered advice on the licence agreements. The pilot drafted Licence Agreement contracts, an example of which is available in the E-Space Deliverable D3.6 in the appendix[12] to ensure that the non-Europeana content was protected and that permitted usage was clearly outlined. This rights clearance process was completed by October 2014.

The pilot was initially open to the idea of developing new dance content but the decision was made to focus only on developing the tools because the preference of dance practitioners was that new content would remain proprietary. Due to the lack of open content available for dance, the pilot focus shifted to other movement oriented organisations and gamification options. However, on account of the collaboration between pilot leaders, professional and non-professional dance artists, and makers of dance content, who supplied their existing content for exclusive use within the pilot, these practitioners are now aware of the Europeana database and are more likely to create new content inspired by, or reusing material from repositories like Europeana.

The Dance pilot offered dance content sourced through Europeana to the E-Space Games pilot, which integrated the material into its Creative game. The Creative game asks a player to create a video collage of dancers using the provided footage from the archive. Each player can manipulate, collage and juxtapose imagery. The Game could be used in an educational setting, allowing a user to create new shapes with the intention of visualising new dance scores, and engages the pupil in an interactive way. The tool might test their knowledge of dance steps or other dance related content (i.e geographical location, genre, era, etc.) This game served as an excellent model for partner collaboration and provided another way of reusing digital dance content.

12 http://www.europeana-space.eu/wp-content/uploads/2014/04/Europeana-Space-D3.6-perspectives-on-creation-and-re-use-of-digital-cultural-heritage-material.pdf

The Dance Hackathon and Approaches to IP

The E-Space project held its second hackathon on the use and reuse of digital cultural content called "Hacking the [Dancing] Body"[13], at the creative offices of CIANT (International Centre for Arts and New Technologies) in Prague on 20–21 November 2015. The hackathon was coordinated by CIANT and the E-Space Dance pilot partners at Coventry University, IN2 and the Universidade Nova de Lisboa. However, CIANT planned a focus for the event that was very different to the pilot activities. They planned to bring in brain/computer interface (BCI) specialists to work with live dancers to experiment with capturing their brainwave information while they are dancing, and to visualise this data in interesting ways.

The hackathon linked dance artists, researchers, scientists, investors and sponsors while also promoting the cultural heritage sector and Europeana's content. Participants reused Europeana dance content to come up with progressive and innovative applications, while also deploying software that empowers and connects artists, creatives, technologists and educators. The hackathon demonstrated that there is great potential for creative engagement in dance content through the development of digital tools, though the interaction between dance and technology is not always straightforward. It was evident that Europeana content has the potential to feed into creative "remixing" artistic activities. Both pilot tools were introduced, and DancePro in particular, sparked interest for use in a variety of ways, inside and outside the dance studio.

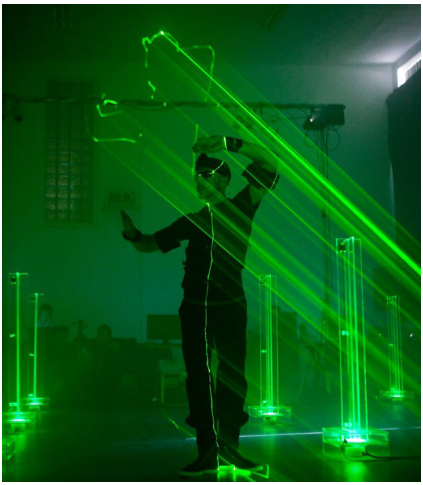
The hackathon participants formed teams for two days of focused and intensive collaboration, with assistance from the hackathon ambassadors; experts in programming, BCI technologies, motion-tracking, and cultural heritage. They explored new creative ideas, designing and developing prototypes. The hackathon focused on the reuse of cultural heritage

13 http://www.europeana-space.eu/hackathons/dance-hackathon/hacking-dancing-body/

materials in live performance, cross-media storytelling, motion tracking and transformation of data, and brain/computer interfaces in performance. Participants were encouraged to combine different aspects of these elements to create something truly new and unique, with the potential to disrupt the market.

Hackathon topics were:

- dance (patterns in body movements);
- state of mind (patterns in brain signals);
- cultural heritage content (patterns in history of art);
- light and sound (patterns and rhythms);
- interactive art, dance, body/mind, digital art.



Bringing together dance and technology, photo courtesy CIANT

Teams were encouraged to:

- explore dance and choreography with a virtual notebook, the DancePro tool;
- write their own dance stories using the DanceSpaces tool;

- transform data from motion capture device into visual;
- prepare multi-media project, as a presentation of their stage-design or choreography;
- remix, implement, transpose digital data from Europeana cultural repositories to inspire and create new performances;
- transform the data from the EEG of a dancer during the performance into the visual design (brain-computer interface application).

An international jury was present to reward the three best teams with a trip to London for an intensive BMW, where the team with the strongest concept and business model after the Workshop would go on to win a 3 month intensive incubation package to deliver their ideas to the market.

First user testing session in Lisbon, Portugal, provided by FCSH-UNL.
Photo Credit: Joao Fiadeiro.

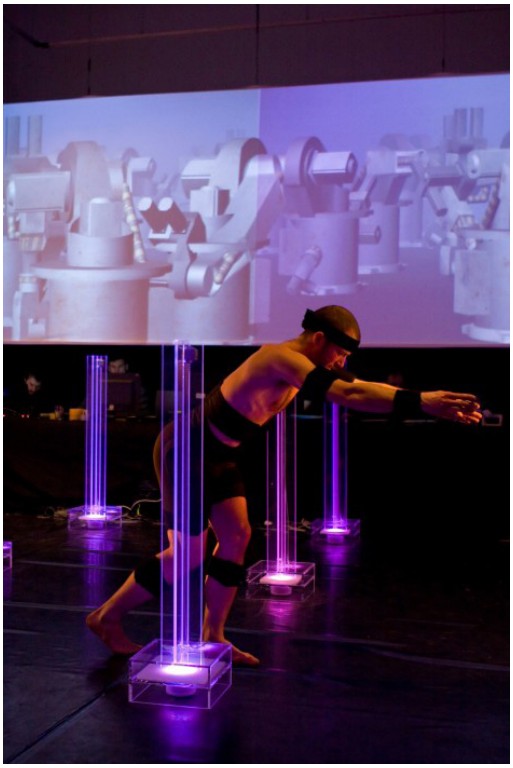
The pilot tools were presented and demonstrated, and many participants downloaded the DancePro tool for their use. However, both tools were for "inspiration" rather than for directly feeding into what was produced.

It was suggested by the IPR Team that materials could be handed out or made available in a hackpack relating to IPR at the dance hackathon or pre-hackathon event on 24 October. However, in the end it was agreed that organisers would give a talk on IPR instead, including information about Creative Commons, opening up, attribution and using filters on Europeana to search for reuseable content. Participants were reminded about the E-Space IPR guidelines during this session rather than being specifically given links to the E-Space Content Space IPR tools or other IPR tools or guidelines. This was thought to be a more informal approach that would not overload participants with written instructions that might seem to be restrictive in the hackathon atmosphere, which strives to be one of freedom, experimentation and endless possibility.

The IPR Team also provided pilot leaders the "protected space" terms and conditions, encouraging them, and the hackathon coordinators at CIANT, to use some restricted content that could go in the "protected space" in the E-Space Portal at the pre-hackathon stage. In the event, restricted content and the "protected space" were used by the pilot for the hackathon (see the section below) but not by CIANT. Advice and reminders were given on IPR issues on a one-to-one basis during the hackathon event, and all participants had access to the E-Space IPR guidelines, since the pilot coordinator sent an email to all the participants before the event, introducing the tools and highlighting IPR issues. This included a link to the E-Space Copyright Tools for Cultural Heritage[14] and the Online IPR Consulting Kit[15], containing IPR tools specifically for hackathon organisers and participants and a HackPack Creation Tool.

14 http://www.europeana-space.eu/content-space/copyright-tools-for-cultural-heritage/

15 http://www.europeana-space.eu/content-space/ipr-toolkit/



Bringing together dance and technology, photo courtesy CIANT

Content used for the Hackathon

The hackathon focused on reusing existing dance content to gamify rehabilitation by using the annotation tool. Participants were encouraged to register and browse the E-Space Portal developed by NTUA.

The “protected space” within the E-Space Portal was also used for the event. The pilot created three separate repositories that are housed in the “protected space” and could be accessed by the hackathon participants via a login. The collections were featured online and were a major part of the dance hackathon. Each collection contained approximately 100 still or

moving digital dance images. There were also plans for DanceSpaces to integrate some of the E-Space Portal's APIs in order to more easily import content from Europeana and other open repositories.

The content used, however, was interchangeable, as with the other E-Space hackathons, which meant that the new techniques used for applying BCI technology to dance performance could be applied to any dance content and did not require specific content, which might be restricted. No new content was created either, so there were no IPR concerns regarding the commercial reuse of specific content at the event.

Due to the schedule of development for the E-Space Portal, it was not possible to integrate the APIs into the digital tools created before the hackathon and user tests; this feature in facts was made available later.

Tools used for the Hackathon

Prior to the hackathon, it was decided that the new content and/or tools generated by the participants during the hackathon would be made available for reuse by the general public but it was hard to gauge at the time what content participants would want to use, and how participants would want to use the newly developed software, tools or provided content. Organisers agreed that the hackathon should stress the spirit of creative reuse, and encouraged participants to make content and tools open and accessible. However, the pilot could not ensure that the participants would see this advantage and work in this way.

Both the DanceSpaces and DancePro tools used in the pilot were made available to hackathon participants but for demonstration and inspiration purposes only. Both tools were proprietary, which meant that participants could use them and build on top of them if they wanted to but would not be able to access or modify their source codes. The project's E-Space Portal, based upon the platform developed by NTUA, was also featured during the hackathon, enabling participants to search and discover cultural content from Europeana and elsewhere.

No other tools were made available to hackathon participants either for demonstration purposes or for participants to modify/build upon to create new applications and prototypes. Participants mostly used their own tools, which consisted of commercial and proprietary software for audiovisual productions. No new tools were created during the event by developers building upon these proprietary tools either, with the exception of new patches-packs created during hackathon for VVVV multipurpose toolkit as a plugin for further dance performances. The patches were shared by the programmer on an open source basis and will be provided to the E-Space repository. Overall, innovation lay more in how the teams worked with existing tools in new performance settings.

Prior to the hackathon it was thought that there were likely to be IPR issues arising from ideas presented in draft prototype designs by the winning teams, and that these issues of ownership would need consideration as they moved to next stage. All three winners drew from open Europeana content but the IPR it was thought would relate to the technology they used. However, in the end, the event was not so much about development but more about incorporating cultural heritage material into the performance setting and testing how that material might interplay with the human body. Innovators within the teams were independent artists and independent individuals rather than developers and employees of companies or institutions. There were, therefore, no potential situations where employers might have rights over the intellectual property provided to the hackathon through an employee-participant, or to intellectual property created by that employee (whether alone or through co-creation) because that employee was using company/institutional materials or research, and/or carrying out these creative activities at the hackathon during normal working hours. In the event, rights to any performances and works created by the artists and performers would remain with them as the creators.

Post-Hackathon Reflection

The initial overall theme of the hackathon proved confusing because it was difficult to determine how developers might be able to incorporate cultural heritage into advanced technologies like BCI and motion capturing. How cultural heritage content could be interestingly reused in a dance setting was also a complex question. However, this hackathon did have the potential to take the reuse of digitised heritage content into the 21st century because some very interesting possibilities existed. For example, a painting could be used as the backdrop on stage during a performance, music found via Europeana could be used, and costumes or settings could be digitally extracted from digitised items.

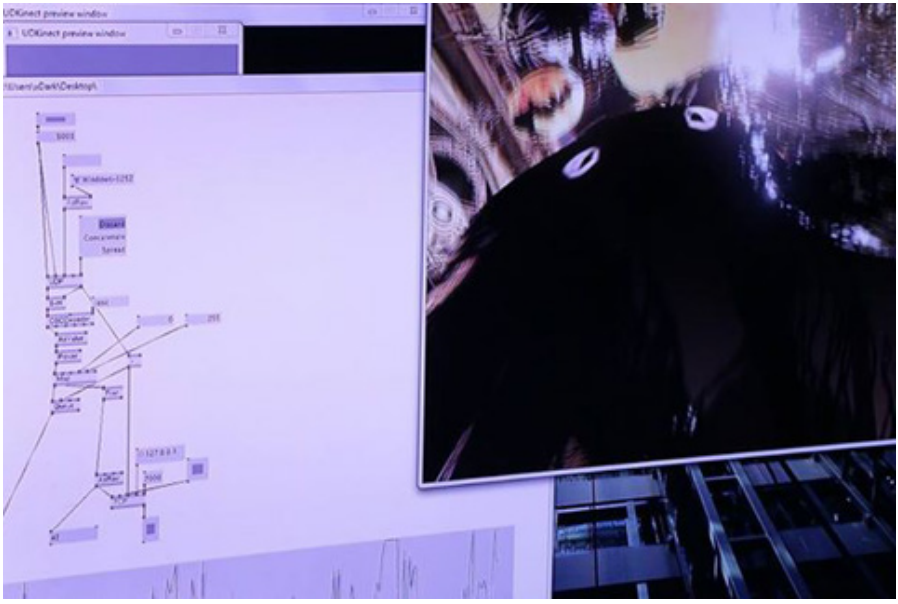


Photo courtesy of the E-Space Dance pilot and hackathon organisers

Hachathon Prague, photo courtesy of the E-Space Dance pilot and hackathon organisers

The hackathon proved to be a great success. CIANT created a flexible and carefree space for innovation, which led to a constant flow of creativity. They had many different technologies on hand for participants to make use of in the two work-spaces available. The participants were a mix of dancers, developers, BMI experts, composers, and designers. Teams were quickly formed with considerable expertise in each. Teams requiring technical or expert guidance were ably assisted by the CIANT team, as well as representatives from the Dance pilot, Europeana and NTUA.

The Dance deliverable contains further information about the pilot and hackathon, including the pilot leaders' own reflections on their approaches to IP. Additionally, here is a link to the video of the Prague Dance Hackathon[16].

16 http://www.europeana-space.eu/hackathons/dance-hackathon/

Business Modelling and Incubation

There were five teams in total at the hackathon but only three could be chosen to be brought to London for the Europeana Space Business Modelling Workshop held by project partners, Remix. In January 2016, the overall winner of the second Europeana Space incubation support package[17] was announced as Nous. Nous are utilising Brain Computer Interface technology to change the way people explore collections and also how institutions can provide recommended pieces to their users. They do this by measuring users' brainwaves, assessing subconsciously whether or not the users like, do not like, or are neutral towards a certain work.

Due to the software being at such an early stage in development, there were no detailed discussions of IP at the BMW regarding tools, prototypes or specific content and how it might be commercialised. It was not decided at this stage whether new content/tools developed by the winning team from the hackathon (which did not include pilot staff in this instance), would be released under proprietary licences as a result of the business modelling stage, in order to make profits for the co-creators involved. This will need to be a business decision taken by the hackathon winners, which will evolve during the incubation process, based on the BMW outcomes.

Lessons Learnt from the Pilot

Europeana connects users to the original source of content, ensuring its authenticity, and giving visibility to a large mass of digital cultural content. However, it has not yet succeeded in always making it accessible, especially for reuse. The user very often has to navigate to the original source in order to use the material. For this reason, the Dance pilot could not rely solely on existing digital platforms, and had to obtain content from diverse sources. Additionally, members of the dance community were often uneasy

17 http://www.europeana-space.eu/wp-content/uploads/2015/03/Incubation-Booklet.pdf

about releasing their dance content to the pilot, and even more reluctant to share and offer images to Europeana. Previous working relationships between the pilot team and independent dance practitioners were needed to ensure that there was enough material for testing the prototypes. The Dance Hackathon, however, provided a great opportunity for members of the Europeana Labs to see live demonstrations of the DanceSpaces and DancePro applications, and this started the process of bringing the two applications into the Europeana Labs family, and therefore, making them available to the wider public[18].

Before joining E-Space, FCSH-UNL had already started a process of patent registration for the tools' concept in the USA, and for the first half of the project, it was thought that registering the patent would be a valuable and rewarding action. However, the increasing costs for the American patent lawyer were becoming unsustainable for FCSH, and its Dean decided to interrupt the process. Free from the restrictions imposed by the patent registration process, which prevented them from sharing the tool with any external users, they were then able to offer access to the tool to the participants in the dance hackathon in Prague. The pilot learnt that when considering patents for digital tools, it is necessary to consider the considerable time constraints involved, and the financial and legal aspects of the process.

Despite the difficulties encountered with access and reuse of dance content, conversations with dance artists during the pilot raised considerable interest in the question of how or whether dance should be preserved and freely shared. This has led some artists to consider contributing their content to Europeana, and making it freely available. The focus on IPR throughout the project therefore had a positive influence on the dance community. Questions about cultural heritage online and the monetisation process also proved critical for the dance community to consider, since digital platforms are becoming ever more important for arts communities in general. The E-Space project, and the Dance pilot in particular, have been

18 http://labs.europeana.eu/apps

pivotal in bringing these matters to the attention of dance communities. The pilot will continue to explore different ways in which dance can be valued, and the ways in which artists can disseminate and distribute their work imaginatively, generating new audiences, re-thinking working processes and finding partners in industry who may be able to support growth.

Future Pilot Exploitation of the Tools

IN2 will be driving the further development and commercial launch of DanceSpaces. They are integrating the technology modules developed and information from the user-evaluation sessions into their technology platform and the commercial SaaS (software as a service) MyMeedia which is used worldwide. In 2015, some DanceSpace software modules were already used in commercial service, so the results of the pilot's exploration of the reuse of cultural heritage are already being brought to the market as an additional aspect of this. The pilot is also considering the commercial use of the DanceSpaces tool as a whole with dance enthusiasts as the target market. If this goes ahead the content in the E-Space Content Space will be reused as customers will need an existing broad range of content to choose from in creating their stories before they are ready to use other sources like Europeana or their own content.

It may be possible to offer the DanceSpaces web application under a freemium model in order to encourage users to subscribe to the MyMeedia service. The user evaluation questionnaire results suggested a business model based on advertising and promoted content might be viable, since all those who responded were happy to see story promotions on DanceSpaces. DanceSpaces could also be used in education, where a custom installation of the application may be required, and provided by IN2 as an added value service. João Gouveia, the developer, is currently eliminating the remaining bugs in the prototype to provide a Beta version, and an instruction manual is being produced for imminent publication. Further discussions are taking place within the pilot and at the project's international level regarding whether there is any potential for commercialisation of this Beta version or

whether it should be offered open source, since there are advantages to both approaches. Further usability testing and feedback from the existing choreographers who are testing the tool in real life settings is required for both approaches, though marketing the tool would additionally require further investment and negotiations with interested companies.

Any commercialisation of the other pilot tool, DancePro, will be driven by the New University Lisbon, which has a broader agenda for creating impact beyond the academic community.

Pilot leaders plan to continue to engage outside expertise in IPR to ensure everything progresses as it should, with the continued use and commercialisation of both the DanceSpaces and DancePro tools, and therefore the sustainability of the pilot outcomes.

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