EUScreen is a multi-year, multi-national online archival project gathering historical television from all over Europe, and is part of the Europeana cultural heritage program. Europeana constitutes a web-based project collecting literature, artwork, music, and film to illustrate Europe’s artistic and intellectual history.

EUScreen’s earliest video material dates back to 1907, but the focus is on Europe’s television legacy, through to the present day. According to an article on the site Museums and the Web, EUScreen’s ultimate goal is “[…] the creation of a representative collection of television programs, secondary sources, and articles, permitting in this way access to students, scholars, and the general public.”

Since its inception in 2009, EUScreen has had direct access to a variety of film and video archives, including the National Library of Sweden, the Netherlands Institute for Sound and Vision, and Radiotelevisone Italiana. Additionally, EUScreen has partnerships with the National Library of Norway, the BBC, and AthenaWeb. (A full list of supporters and partners is attached.) The EUScreen consortium is coordinated by Sonja de Leeuw, professor of Television Culture at Utrecht University.

EUScreen is, thus far, an exceptionally successful project. With a great deal of funding and support, primarily from the European Commission’s eContentplus and ICT-PSP programs, the website has grown into an impressively huge video, audio, and text database. They have exceeded their original goal of having 30,000 pieces of video material digitized and accessible. As of September 2013, EUScreen has 34,956 videos, 525 articles, 4,899 photos, and 96 pieces of audio accessible on their website.

EUScreen uses an H.264 codec on its videos, and require content providers to make these videos compatible with Flash. Audio files, including those attached to the video, are in either mp3 or wav format. The content providers themselves can create HTML5 or Silverlight versions of their own videos. Many of the files are hosted at Noterik, a Netherlands-based company specializing in online video. Selection criteria is primarily concerned with the historical significance of the video content, with most of the videos covering a
select 14 historical topics.\(^8\)

Johan Oomen (technical director for the EUScreen project) and Vassilis Tzouvaras’ overview of EUScreen’s complex filing system reveals that there are four scenarios determining where the master files can reside:

1. Content provider transcodes and files are hosted by service provider Noterik.
2. Content provider transcodes and the content provider hosts.
3. Noterik transcodes and Noterik hosts.
4. Noterik transcodes, and the content provider hosts.\(^9\)

The picture and sound quality of the videos is a slight concern. The video content has low bitrates (generally 500-to-1000kbps) and exhibits a great deal of artifacting. Material sourced from film-to-video transfers fare the worst, and many have an intrusive timecode stamp\(^10\). Although the website's videos are fine for access, it is hoped that the original files are of better, or lossless quality.

One potential obstacle is that thus far, the videos are only available in their original language. A brief description of each clip is provided, but not a full transcript\(^11\). This means that non-speakers will have real difficulty with translating any spoken audio. (To date, EUScreen has videos in a total of 18 languages, plus one song performed in Chinese for a visiting delegation in Prague.\(^12\))

Although some of the video content is in the public domain, a good deal of it is copyrighted and owned by respective television companies, who have given permission to use these materials for free access on EUScreen's behalf. A 'Terms of Use' section appears on every video, with a notice as to who owns the material. Some of the donating companies have used EUScreen's services with the stipulation that although the video material will be preserved, EUScreen will not allow public access to it, either for copyright or privacy concerns\(^13\).

Copyright has thus far been one of EUScreen's biggest concerns. EUScreen has even hosted panels and discussions on the intellectual property issues both they and the Europeana project as a whole have had to face\(^14\). The issue of Orphan Works, and the need to save works not traditionally covered by copyright, has been given a major push thanks to the Europeana project, with the hopes of getting legislation passed in October 2014 that will make it easier for

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10. An example: http://www.euscreen.eu/play.jsp?id=EUS_E2C0395C8C8E44F5980C0E870903C11D

11. Metadata is provided in several languages, depending on the country of origin on your IP. Fields include country of origin, broadcaster, running time, program name, broadcast date, important interview subjects, etc.


Orphaned Works to be saved\textsuperscript{15}.

Due to the myriad of content providers sending in digitized material, a major concern for the website is the ease of recording metadata. Europeana extensively utilizes EBUCore, which is an off-shoot of the Dublin Core model\textsuperscript{16}. EBUCore (the EBU standing for ‘European Broadcasting Union’) provides a greater compatibility for online usage, and is the metadata scheme of choice for EUScreen\textsuperscript{17}. Additionally, there is a specially-made SKOS thesaurus consisting of 15 languages that assists in acquiring multilingual metadata. Multilingual search options are made possible by the Thesaurix software\textsuperscript{18}.

MINT, an open-sourced, web-based scheme that uses the XSL language, is used for the initial metadata ingestion. This is partially so that each entry can be outputted to HTML for easier access\textsuperscript{19}. Although EUScreen is a project with a goal towards open sharing, access protection is a major reason for the use of MINT\textsuperscript{20}.

EUScreen’s metadata encompasses three URIs for each piece of material: the object itself, a resource describing the object with an HTML schema, and a resource describing the object with an RDF and XML schema\textsuperscript{21}.

Metadata is published as Linked Open Data once transformation is completed. Each piece of material on the site has its own publicly available metadata section, listing a limited number of fields. This metadata will help in linking the Europeana projects together. As far as goals for metadata are concerned, EUScreen hopes to have a million metadata records for Europeana.

EUScreen is making major contributions to research and development in three main ways – the portal itself, hosting blogs devoted to the issues of preservation and accessibility, and the development of a set of tools that will allow anyone to create and present their own virtual exhibitions using material from EUScreen itself.

In May of 2012, Sanna Marttila of Aalto University and Daniel Ockleon of Noterik presented a design process that would be made available on EUScreen’s site, allowing users to combine different media for educational purposes with a virtual exhibition maker\textsuperscript{22}. The use of these tools would be governed around a creative commons license. Although the virtual exhibition feature has not yet been released, it has already been shortlisted for FIAT and IFTA’s Archive

\textsuperscript{15} Markovich, Reka. "Licenses for European Culture. July 2013. EUScreen Blog. \(<\text{http://blog.euscreen.eu/?p=3996}>\)

\textsuperscript{16} Author Unlisted. “EBU Core Metadata: Operating Eurovision and Euroradio”. February 2013. page 3

\textsuperscript{17} Tzouvaras/Oomen. Page 7.
\textsuperscript{18} Ooman. Page 19-20.
\textsuperscript{19} "An Introduction to MINT" 2007. MINT Wiki. \(<\text{http://mint.image.ece.ntua.gr/redmine/projects/mint/wiki/Introduction}>\)
\textsuperscript{20} Ornsby, Andrew. "How to Aggregate and Enrich Television Content" July 2013. EUScreen Blog. \(<\text{http://blog.euscreen.eu/?p=3981}>\)
\textsuperscript{21} Graña/Cucchiara. Page 141.
\textsuperscript{22} Marttila, Sanna; Ockerloen. “EUScreen Platform, Design Process and Tools” May 25, 2011. \(<\text{http://www.slideshare.net/fullscreen/EUscreen/euscreen-platform-design-process-tools-13134913/1}>\)
Achievement Awards for Best Use of Archive, Most Innovative Use of Archive, and Best Archive Preservation Project\textsuperscript{23}.

Beginning this past March, EUScreen has begun a new project known as EUscreenXL, which will greatly expand upon EUScreen’s original goals, hopefully becoming the ultimate resource on Europe’s television history. Thus far, there are 32 partners providing funding and support, with the project scheduled to conclude in February 2016.

Although there have been issues with video and audio quality, and with copyright, EUScreen has had the rare privilege of going above and beyond its original mission statement, and giving free digital access to a wide variety of material to the public. The EUScreenXL project and the virtual exhibition program will even further solidify Europeana’s ambitions to bring Europe’s legacy to the world at large.

\textsuperscript{23} “Virtual Exhibitions Shortlisted for FIAT/IFTA’s Archive Achievement Awards” EUScreen Blog < http://blog.euscreen.eu/?p=3912>
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“Virtual Exhibitions Shortlisted for FIAT/IFTA’s Archive Achievement Awards” EUScreen Blog <http://blog.euscreen.eu/?p=3912>
Appendix

EUScreen Primary Contributors
Czech Television  Cinecitta Luce  Danish Broadcasting Corporation
Deutsche Welle  Hellenic National Audiovisual Archive
National Audio Visual Institute (France)  National Library of Sweden NAVA
Radiotelevisione Slovenia  Radio Television Belge Francophone
RTE Libraries and Archives  Televisio de Catalunya  Telewizja Polska SA
TVR Romanian Televisio  Flemish Radio and Television Broadcasting Organization

Technology Provided by
Europena Foundation  European Broadcasting Union
National Technical University of Athens  Noterik

Research In Conjunction With
Aalto University  British Universities Film and Video Council
Eotvos Lorand University  Maastricht University  University of London
Utrecht University