Report on the work undertaken by the DIAMM project with a grant from the Andrew W Mellon Foundation of $256,463

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Project Phase 4

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Key to acronyms

CCH – Centre for Computing in the Humanities, King's College, London
DIAMM – Digital Image Archive of Medieval Music
OCVE – Online Chopin Variorum Edition
RISM – *Repertoire Internationale des Sources Musicales: Manuscripts of Polyphonic Music c.1000 to 1550* Series B IV (5 vols. + Supplement) (Henle-Verlag, Munich, 1965 ff)
CCM – *Census Catalogue of Manuscript Sources of Polyphonic Music 1400-1550* (5 vols.) (American Institute of Musicology, Hänssler-Verlag, Stuttgart, 1979)
MOTET – the Motet Database, University of Florida: http://www.arts.ufl.edu/motet/default.asp
AHRC – Arts and Humanities Research Council (UK)
CNRS – Centre Nationale de la Recherche Scientifique, Tours

DELIVERABLES AS LISTED IN THE GRANT PROPOSAL

1. Metadata: complete content of RISM Series B IV/1 and RISM Series B IV/2 online searchable and proofed. Volumes 1-2 of CCM scanned and input in raw form, proofed as far as time allows.

2. Text: at least 50% of source entries accompanied by text transcription

3. Image content: not possible to define fully as contributor responses cannot be anticipated. We would aim to make all data currently archived available online, and bring items online as soon as permission is received from the contributing archive.

4. Enhancement of images: all images of damaged sources accompanied by at least one enhanced version. Prototypes of at least two systems for delivery of enhanced images alongside original images scoped (side-by-side and overlay) and one system online and active. Report on usability of superimposition-adjust tool.

5. Enhancements to existing metadata: amount of content would depend on user response, but will also include enhancements by DIAMM team.

6. Delivery mechanism: Enhanced delivery mechanism in place, with new features and functions including comments window and text transcription window with each image; searchable metadata database with select metadata delivered with each image; management system for handling metadata enhancement in place, with user-contributed enhancements accessible online including audit-trail; simple contextual help available; system in place for delivery of enhanced images in tandem with original images; check box system for flagging images for individual users online or scoped for future delivery if too complex for this stage of development. Annotation tool

7. Authentication: Complex permissions system developed to allow individual, group, and public use. Just about, yes. Possible implementation of MyDIAMM system. Implemented.

8. Sustainability: Report by sustainability consultant with proposal for long-term management of project

SUMMARY OF PROGRESS

We are pleased to report that progress has been excellent in this phase of the project, as the detailed report below will show. In particular, we have managed to get significantly more metadata online than we had originally envisaged, with all of RISM and a significant portion of CCM being available in structured, searchable form, and the complete catalogues available as page images. Another notable success has been in the negotiations with libraries and other image projects, which will certainly result in a large increase in the number of images available, to almost 20,000 in the next few months, and to almost 50,000 in the next two years. DIAMM has also been in discussion with a number of organizations and projects which are engaged in or planning mass digitization projects, and many are interested in using DIAMM as their delivery mechanism. Just in the last week we were offered manuscript images from the St Gallen project.

Our technical developments have also proceeded well, though with some small changes to our strategies, based on user trials and user feedback. These changes are pointed out below. The sustainability planning process has led us to a re-evaluation of the long-term goals of DIAMM, and in part is what has led us to make the connections which will almost certainly result in increased scope for the project, and a rapid extension in the availability of images.

We would like to thank all who have been involved in this phase of the project, including the wide range of scholars and others who took part in workshops, meetings, and user trials. In particular we would like to thank the Andrew W Mellon Foundation for providing the funding for this work, and also for their intellectual input.

REPORT

1. Metadata

1.1. Content:

The scanning of the complete RISM and CCM produced 2554 TIF images. In volumes where graphic incipits were published as part of the description, these pages were manually split into incipits, yielding a further 6929 images.

Entries relating to DIAMM materials were brought online first (as searchable full text produced by OCR), and the gradual inclusion of the remaining entries from RISM volumes into the database has led to an increase in online source descriptions from 494 sources to 1186 manuscripts (proofed) at the time of writing. Some are still to be brought online but are being held back until proof reading is further progressed. The complete content of RISM Series B IV volumes 1-5 and Supplement will be online by the end of the summer. Since CCM is arranged alphabetically, it was not logical to input volumes 1-2, so content has been taken from volumes 1-5, prioritised by relevance to current holdings. Approx 45% of CCM appears online.

The full content of both RISM and CCM is accessible online in the form of page images of the original catalogues.

As well as presenting the metadata for these 1186 manuscripts, each one has had its cryptic bibliography keyed to a full bibliographical database, so that the full entries can be listed via a mouseover tool, or alternatively in full within the bibliography field in the source description.

All incipit entries in RISM vols B IV/1 and B IV/2 have also been added to the database and keyed to their respective source descriptions. Those for B IV/1 and the Supplement have been tagged for composer and genre (where known); score or part layout; in each part: clefs; voice designations; text incipit; language of text; and links to other incipits referenced in the entry. A significant proportion of entries in B IV/2 have also been marked up.

1.2. Searchability

Trials revealed that users are more likely to search on non-core details in source descriptions, since these are more likely to yield search results that exclude materials in which they are not interested. This was particularly frequent in cases where the user was using the search facility because s/he remembered a particular comment or phrase, but could not remember the context or source to which it referred. This made the selection of material suitable for markup very difficult. Selective markup also, in effect, predefined the searches that could be performed, and limited the user to those keywords.

The variation in the style and content of the MS descriptions meant that certain core elements were not present in all descriptions, and therefore search results based on core-metadata markup could be very misleading, or at the least, not representative of the manuscripts covered by the database.

All users consulted said they would prefer free-text searchability, also embracing the fields already offered. Demonstration of Ajax ‘free’ text search, which offers up words as the user types, was enthusiastically received, and we hope to implement this in preference to the current drop-down menus.

Free text search has been implemented on the source description field, where all relevant keywords are to be found. In addition markup of notation style, provenance (searchable), writing surface and page-measurements is complete for entries in the database; these are the only elements which appear consistently across all descriptions.

1.3. Expansion of the back-end database

There has been considerable and significant expansion to the back-end Filemaker database:

Complete RISM and CCM entries for all existing manuscript descriptions are now included in the description field for the MS, and these have been fully proofed. Entries for additional sources (without images) are also included and proofed. Further entries are being created and will be proofed as time allows.

Entries at the 'item' level (i.e. individual musical items present on each page currently only represented at the level of the page image). Items are represented by 3388 incipits (typeset musical extracts of the opening of a piece) presented in .png format. Each incipit has the following information implicit in the notation which cannot be searched on in picture format and, because of the complexity of the notation, cannot be economically passed through OCR even to extract part of the information, so has been transcribed to relevant fields in this table of the database:

i. folios on which this item appears
ii. part layout (score or parts)
iii. number of parts
iv. clef of each part
v. text of each part (often different in each voice)
vi. language of text
vii. voice designation (e.g. motetus, tenor, contratenor)
viii. genre or piece title (e.g. ballade, motet, Sanctus)
ix. composer (original name and variant spellings)
x. notes on the incipit (e.g. missing parts that may be located in other sources or description of notation peculiarities)

Reference to a secondary source where missing parts or a fuller incipit may be found (a complex lookup allows this secondary image to be found and delivered alongside the original incipit)

New data tables have been constructed for composers and genres (linked to items, images and source descriptions). It is now possible, therefore, to find incipits and page images for any of the items in i-xi above in any combination, or to create worklists for composers (based on the manuscripts in the database) or lists of any other searchable item. It is also possible to create highly complex search results, e.g.: find all tenor parts in c4 clef which include the word 'cuer'; Other searches could enable a user to create (e.g.) a list of all motets by a particular composer; all pieces of a particular genre in a particular language or from a specified date period or manuscript source; all french motets; all 'alleluia' settings in three parts or by a single composer or group of composers; all 'ballades' in the Bodleian Library etc.

A bibliography database, listing all the sources cited in RISM and CCM in short form, keyed to the complete citation. This will enable us in any future development to create complete-citation bibliographies in place of the cryptic form employed by both RISM and CCM. The entries are currently in 'raw' form, and are being proofed and marked up for style by research assistants on the MOTET project. Each bibliographical entry has been linked to every source description where it appears, and there are additional links between the composer database and bibliographical items relevant to each composer.

2. Text

2.1. Sources

There are numerous digital sources for the text of mass Propers and Ordinary, which would cover the majority of the online sources. However there is no reason to limit this to sources with images online, since where we know that a piece is a *Gloria* (for instance) we are now able to append the full text to the source entry and tag it to the relevant folio or page. The remaining texts are a) secular song or b) motets.

a. Secular song transcriptions are not available in digital form at the moment, although some specific theses (e.g. Irmgard Lerch's work on the Cambrai sources) provide some isolated examples.

b. The bulk of the non-mass text is in the motet repertory, and this is either transcribed (usually from DIAMM images) or in the process of being transcribed by the MOTET project. Access to, and permission to use the MOTET content in DIAMM has been successfully negotiated. The MOTET database has also evolved a protocol to deal with various problems in transcribing text

from this period, which have been tested empirically, and so seem to be robust. An added advantage in the MOTET data is that it is being input and managed within a Filemaker database, so will be directly portable to the DIAMM content management system.

A text transcription tool has been added to the DIAMM image display, and text transcriptions from existing sources can be added here, while additional, or new transcriptions, may be added by users. The transcription tool includes sufficient formatting facilities to allow quite complex transcription content.

At present text incipits for sources in RISM BIV vols 1-2 are available in the database but not online. Similarly, full-text transcriptions in standardized spelling for all the mass propers are also within the back-end database. Insertion of these texts directly to the text transcription tool requires further scripting from CCH, and will be undertaken during Summer 2006.

2.2. Searchability

Full-text searchability has been scoped, and seems practical. The recently-implemented free-text search tool enabling users to search the text of the source descriptions is being used to prototype the sort of search that might be implemented on the text transcription field. This is a key feature to be implemented in the next phase of the project.

3. Image content

Renegotiation has resulted in the image content rising from approx 30% of **7134** archived images online to 62% of archived images now with agreement to be delivered via the DIAMM website, and 47% so far delivered online (some negotiations have only just concluded). These remaining images will be made available in the next three months.

We have notification of intent to deposit a further 12,300 images with us, all of which include online delivery permission, which would bring the delivered total up to ±16,700 images online, or 86% of the total archived.

Negotiations are under way for a further 7000 images from Trent, and just under 300 from Apt and Caius Cambridge, with the intention of bringing these online during the summer and autumn of 2006.

Our expectation is that the collection size will certainly increase from 7134 to at least 19,434 images over the next year (see details in Appendix 6), with the possibility of c. 50,000 additional deposits if all pending negotiations are successful.

Fuller details of the following information is given in Appendix 5

3.1. Images already in the DIAMM Archive:

With few exceptions the entire UK collection is now accessible online, complete MSS as well as fragments.

A large number of French documents (mainly fragments) are online. Negotiations are ongoing for the remainder.

The Jena collection has been delayed due to a number of technical difficulties which have mainly now been resolved. The library has stated that they are committed to a collaboration with DIAMM, both in depositing the images in the archive, and in allowing us to deliver them online

3.2. New Images from Music Sources

Negotiations for the delivery of images from the following collections are in process or completed (for fuller details see Appendix 5).

- The library of Peterhouse College, Cambridge: the Peterhouse Partbooks, and their presentation online.
- The Trent Codices. (Museo Provinciale d'Arte, Castello del Buonconsiglio)
- The Machaut Manuscript formerly known as *Vogué* (Parker Library, Cambridge)
- Machaut Online (dependent on grant application)
- Medieval Chant MSS (Susan Rankin) (dependent on grant application)
- The music Manuscripts of Cologne Cathedral, Germany
- The music Manuscripts of St Gallen, Switzerland
- The music Manuscripts of the Herzog August Bibliothek, Wolfenbüttel, Germany
- The Wollaton Antiphonal, University of Nottingham Library
- The Alamire manuscripts in the National Library of Austria, Vienna

3.3. New images from non-musical sources

The following projects have indicated agreement for online presentation of their materials (For fuller details see appendix 5):

- The Lancelot-Graal project, University of Pittsburgh (http://vrcoll.fa.pitt.edu/stones-www/lancelot-project.html);
- Arthurian Manuscripts;
- Medieval Manuscripts (including music) of the Czech National Library, Prague;

Other negotiations (expanded in Appendix 5)

- The microfilm images of the Jordanus Project (http://jordanus.ign.uni-muenchen.de/ - subject to negotiation: approx 60,000 images, including a number of musical treatises (e.g. Boethius, Guido d'Arezzo);
- Bulgarian Academy of Sciences manuscript collection.

4. Enhancement of images

Work has progressed throughout the term of the project in creating enhancements to images of damaged documents. Although these enhancements are now complete, it was felt beneficial to take a second look at documents enhanced in early stages of work, and also for a second skilled technician to go through the images and look for ways to improve on existing enhancements, or determine how many stages in the restoration process should be presented alongside the main image. A significant proportion of the images are now online, and we expect the remaining images to be uploaded during Summer 2006.

Secondary images (UV, watermark etc) have also been brought online.

5. Enhancements to existing metadata

The data and metadata is only now sufficiently complete for detailed scholarly work, and therefore we have not yet been able to commission specific studies. Several scholars have been approached to provide updates and corrections to existing data, and they have expressed their willingness to contribute as far as their time allows. As this was not costed in this phase of DIAMM, it has no financial implications. In order to encourage user feedback of this sort a number of strategies have been implemented:

a. An international advisory board of senior scholars will be appointed, who will be encouraged to input data via commenting tool, or directly to the project manager, in particular (in the first instance) to bring the bibliographical entries up to date. This is considered a far more efficient process than paying a graduate student to sit in a library combing RILM entries.

Kathryn Bosi, Librarian, Villa I Tatti
Myke Cuthbert, Harvard University
José Esteban, Ministry for Culture, Madrid
Michael Friebel, University of Salzburg
Marco Gozzi, Università degli Studi di Lecce
Oliver Huck, University of Jena

Martin Kirnbauer, University of Basle
Karl Kügle, University of Utrecht
Peter Lefferts, University of Nebraska-Lincoln
Catherine Massip, Music Librarian, Bibliothèque Nationale, Paris
Thomas Mathiesen, Indiana University
Pedro Memelsdorff, director of Mala Punica
John Nadas, University of North Carolina at Chapel Hill
Jason Stoessel, University of New England, Australia
Philippe Vendrix, CESR, University of Tours
Lorenz Welker, Institut für Musikwissenschaft, University of Munich
Giovanni Zanovello, University Padua
Agostino Ziino, University of Rome

b. Two British scholars with complementary skills and expertise have been appointed in the capacity of 'associate directors': Elizabeth Leach, medieval musicologist (one of the next generation of scholars in medieval musicology), lecturer at Royal Holloway, and Nicolas Bell, Curator of Music Collections at the British Library.

c. A new application will be made to the AHRC in the UK to create one or two studentships in medieval musicology, to encourage students embarking on a PhD to work in this field, thus seeding the graduate population for the future.

Rather than use resources on a feature that would shortly be superseded, and since the implementation of an audit trail for new material would be far more limited in usefulness than the inclusion of more of RISM and CCM than had been intended (regular users reported that their principal use of the website was to access catalogue metadata, not images), resources were concentrated on populating the database with existing catalogue material.

6. Delivery mechanism (see appendix 2 for details)

6.1. General

The gradual addition of tools and features to the DIAMM website, and the addition of a large number of additional sources to the database has created a more complex working environment than is comfortable for the user?, particularly with respect to the proliferation of tools within the image viewer. This has partially been managed by the introduction of a new interface within the image view.

Movement is necessary between one window and another, or opening new windows which, while manageable at present over-complicates the content presentation unnecessarily.

Development work in CCH in tandem with user trials and reports indicates the need for a more integrated work environment: the progress of web technology, and particularly the broadening acceptance and compatiblity of Ajax as a data delivery management tool indicates that this functionality should be available within 18 months.

A new integrated workspace which would resolve issues of complexity and proliferation of features has been scoped to mock-up stage and will be the subject of part of a future bid by DIAMM. CCH is in the process of building a prototype of this workspace in another project, on which the DIAMM website will draw.

6.2. Annotation and commenting tools

We had hoped to be able to make use of the OCVE annotation tool, but the zoomify viewer (necessary for the delivery of high-resolution images) does not allow this because it breaks each image up into small tiles. Annotations would only attach to the particular magnification that the user was looking at, and may be confused by panning around within the viewer, where the image co-ordinates would change. Users were consulted about the possible usefulness of this tool, and all responded that the facility it offered was not significant in comparison with the possibility of losing some zooming or panning functionality. All felt that it was sufficient to be able to comment using a comments box to the side of the image.

a. Image captions on the image-viewer are now formatted as live links to library and source information (issue raised by first usability trial)

b. Public comment tool: this allows users to comment on individual images and for these comments to be available to any *registered* user of the online image collection. Previous comments appear below the new comment, with the oldest comment therefore appearing at the bottom of the list. Users' names and the date of their comment are automatically inserted. A reasonable range of formatting commands are available as buttons

c. Private comment tool: this appears below the public comment tool and functions in exactly the same way (markup etc) as the public comment tool, except that the contents are only visible to the registered user who made them. Unlike the public comment tool, the contents of this box may be edited by the user repeatedly. This tool will include a 'publish' button, which will automatically copy the contents of the box to the public comment tool.

d. Text transcription tool. This has been implemented in the image-viewer.

e. The tools and facilities provided on the image-viewer can be collapsed vertically individually, or horizontally to maximize the use of the image-viewer space onscreen.

6.3. 'MyDIAMM'. Although we expected to be able to scope this feature in the current phase, it has been possible to implement it and it is currently in use. There are several refinements in prospect which would be put in place within the proposed integrated workspace.

f. Users may now create persistent use-lists linked to their login account, which appears as a new link on the navigation bar ("MyDIAMM"). Images are 'tagged' by creating an annotation in one of the comments tools, and are separated into two lists on the MyDIAMM page, of publicly and privately annotated images.

6.4. Search

g. The search interface now allows users to specify the number of images per page shown in their results, and links at the bottom of the page allow them to skip forward to the middle or end of the results, as well as moving page-by-page.

h. Free-text search on the source description field has recently been implemented

6.5. Image access and usage:

i. An 'image number' and a 'source number' have been added to the captioning of images to allow users of the commenting tools to make abbreviated references to other images or sources instead of having to give the full citation or a cryptic reference that may not be understood by other users. This reference becomes a live link to the relevant image/source description when pasted into the comment or text transcription box, thus vastly improving fast access between groups of images and sources.

j. Access to scanned page-images of RISM and CCM. All the volumes of RISM Series B IV and CCM have been scanned and the page images uploaded to the DIAMM server. Links to the pages relevant to source descriptions are accessed via buttons on each source description page.

k. Some minor adjustments to content have been made in response to comments in the first usability report.

l. Limited contextual help has gone online, and is edited and updated in response to user needs. It can be turned on or off depending on the user's requirements

6.6. Presentation of secondary images in conjunction with original images.

The creation of a presentation method of an unlimited number of enhanced or secondary images alongside the original image of a document has been successfully implemented using the zoomify viewer, thus enabling the secondary images to be presented at the same high resolution as the originals, with the same zoom and pan facilities. Users immediately requested the ability to view

duplicate copies of the main images alongside each other in order to use different magnifications simultaneously. This has not yet been implemented, but may be added during Summer 2006.

Investigation of the Zoomify software has shown that rotation, superimposition and other image-based activities are possible in this medium, and accommodated by the Flash plugin. Tests done by the University of Melbourne are available for demonstration purposes (http://128.250.125.178/) and can be implemented if future user-trials indicate any of these processes would be useful. User responses to the suggestion of incorporation of this functionality showed a strong preference for a) more metadata content and b) side-by-side viewing rather than the ability to superimpose. For this reason development work was concentrated in other areas which more closely addressed user requirements.

6.7. Customizable workspace

User research indicated that this would not be used to any significant extent given the limitations of current content, and activity would be better directed to the increase of content, particularly of metadata, when a more customizable work environment would become far more useful and necessary. Several prototypes were scoped, and the most significant single outcome was the need to find a way to cope with the proliferation of add-ons in the image-viewer environment. The current solution seems to meet these needs, including a list of secondary images, the ability to see secondary images in the viewer, public comments, private notes, text transcription and contextual help, all of which may be deselected or tab-hidden by the user to optimize workspace. The Dublin Core metadata and copyright notice remain visible at all times.

Customizable metadata alongside the image would represent an over-proliferation of add-ons in the image-viewer and would have to be part of the planned integrated workspace

It is intended that in the scoped integrated workspace full 'customizability' of the tools and appearance will be stored and linked to the user's login.

6.8. Online registration

The legal and practical issues surrounding online registration for users of the site have been investigated thoroughly and the outcome of this investigation is extremely favourable. This facility will be implemented at the earliest opportunity (dependent on some reengineering of the system).

7. Authentication

Authentication currently allows users to create and individual or shared workspace, to make comments which only they may see, or the shared group may see, or which may be publicly accessible.

The project manager and development team currently have 'super-user' privileges which allow them to modify the online database directly. We did investigate the possibility of allowing other users write-access to the wider database as well as read access. However, the danger of corruption and the problems of version control seemed to us to make this unwise. Users also felt uneasy about entering data, and preferred that it went through the project manager and/or development team. At present,

The feed of new information is minimal and is managed using the offline database with updates regularly uploaded. the need for online access that is made without the participation of the project manager is very small.

8. Sustainability

A great deal of work has been done in sustainability planning to ensure the future survival and growth of DIAMM, Various sources for sustainable funding have been investigated, and the results of this research indicate that the most effective policy, and the one most likely to succeed, would be to phase in a charging model for parts of the delivery mechanism for which there is no issue of rights or shared ownership, *viz*

those parts of the site that give added value to the images which must be delivered without charge because they have been given to the DIAMM online collection without charge by their depositors.

Income generated by charging for access to the added tools and searchability would depend largely on institutional subscriptions, and these would only be forthcoming if the content delivered by DIAMM was seen to benefit a significant portion of an institution's community.

8.1. Workshops/studies

A number of key comparable online resources were consulted for planning information, and two working groups were held which contributed both user and resource contributor data to the construction of an informed foundation on which to build a sustainability plan. Workshops, consultation and research have been undertaken by Kings Digital Consultancy Services and the Project Manager both independently and under the guidance of the specialist sustainability consultancy service provided by ABL Consulting. We have also consulted with the business development units at both Royal Holloway and King's College. The report on the second sustainability workshop is given in Appendix 7, and the first strategy report identifying key issues that was submitted to the sustainability consultant are presented as Appendix 6

The main finding of all the key user and depositor groups consulted is that the sustainability of DIAMM will depend on the expansion of its content. Expansion within musicology would still mean that the user community was relatively esoteric. Both musicologists and non-musicologists recommended an expansion into other types of manuscript within the medieval period, since these sources require the same type of research approach in many respects, and would therefore benefit from the research environment in a way that other musical repertories would not. In addition, the study of medieval music, and medieval manuscripts in general has a tendency to extend outside subject boundaries imposed by later-period research, and the ability to cross those boundaries within one environment would be of immense benefit to researchers and casual visitors alike.

8.2. Sustainability contract

The contract for investigating sustainability and creating a viable sustainability plan was awarded to ABL Consulting (London). Their report, which drew on the preliminary work (Appendix 6) and subsequent investigation by the project team (Appendix 7), is given in Appendix 8.

We have concluded that DIAMM can be successfully sustained over the long term, but in order to do this we need to a) increase available content and b) continue to build tools and added value that can produce a revenue stream. We have been greatly surprised and pleased at the progress we have made over the last year in negotiating for more of the content in our dark archive to be made accessible, and in the new contacts we have made which are going to result in substantial new materials being made available. We are confident that the best model to use is a mixed one, with most revenue being raised through institutional subscriptions that will allow users access to tools, added value content, and secondary sources. The images themselves must always be free, but other content can be charged for. We also have opportunities to raise revenue through consultancy and some limited advertising.

Engaging in this process has given us new ideas about developing DIAMM into the future, and has renewed our enthusiasm for the project.

9. Other

9.1 Financial report – see Appendix 9

9.2 Communication

Workshops in general have been invaluable in creating an information feed from the user base and forging links between the end user and the technical development and management teams. Several projects have been approached to incorporate their data into DIAMM (see Appendix 5); there is still a tendency for projects to budget to create their own delivery systems, even when this would duplicate work undertaken in DIAMM. This seems to be a shortcoming in the grant system, and has

been discussed with national bodies such as the AHDS, who are also actively promoting the move towards DIAMM becoming a portal for the delivery of image-based projects. Several conferences have been attended where papers on DIAMM were delivered, and these have resulted in some significant collaborative contacts.

9.3 Dissemination and Events

- 17 Jan 2005 [with Marilyn Deegan, CCH]: 'Digital technology and the transformation of humanities scholarship 1: a general introduction.' RSMTP Seminar, London, British Library
- 17 Jan 2005 [with Richard Chesser, British Library]: 'An introduction to the principles and practices of intellectual property and copyright.' RSMTP Seminar, London, British Library
- 15 April 2005: First sustainability working group, London
- 15 June 2005, DigiNews article, 'Bringing the Digital Revolution to Medieval Musicology: The Digital Image Archive of Medieval Music (DIAMM)', Julia Craig-McFeely and Marilyn Deegan.
- 5 July 2005: 'Creating a digital image resource from manuscript materials' Conference on The Islamic Manuscript, Cambridge
- 15 July 2005, 'Digital Images and the impact of the 'digital revolution' on scholarly access and research with medieval music documents' International Medieval and Renaissance Conference, Centre des Études Superieurs de la Renaissaince, Université François Rabelais, Tours, France.
- 3-5 October 2005: usability trials on DIAMM development website, London and regions
- 7 Nov 2005 [with Marilyn Deegan, CCH]: 'Digital technology and the transformation of humanities scholarship 1: a general introduction.' RSMTP Seminar, London, British Library
- 7 Nov 2005 [with Richard Chesser, British Library]: 'An introduction to the principles and practices of intellectual property and copyright' RSMTP Seminar, London, British Library
- 25 November 2005: 'Creating a digital research resource from manuscript materials in widely diverse ownerships.' Digital Archives for the Safeguard of European Musical Heritage: *Petrarch on Music* and *French Songs of the Ars Nova*, University of Arezzo-Siena, Arezzo, Italy.
- 15 May 2006: Usability focus group and workshop, London
- 16 May 2006: Sustainability focus group and workshop, London
- 3 June 2006: 'digitization and new technologies in music archival research', Music Archival Research Skills Day, University of Leeds
- 5 June 2006: 'How big is big enough?' Expert Seminar on Digitization and Workflow, London
- 27 June 2006: High-quality digital imaging of medieval manuscripts in the field, imaging issues in relation to scholarly and archival needs, and content delivery and management of a digital archive.' Oxford Conference on Computerised Transcription of Medieval Chant Manuscripts, Oxford
- 29 June 2006: Digital Restoration Workshop in conjunction with the AHRC ICT Methods Network
- June 2006 PUBLICATION (print and pdf): Digital Restoration Workbook (Julia Craig-McFeely and Alan Lock)
- Forthcoming: 'Bringing medieval music back to life' Science Photo Library Feature by Rob Stepney, publication t.b.a.

APPENDICES

Appendix 1 (Excel file)

Sources for full text transcription

Related online resources for manuscript study:

A: musical

B: non-musical

http://www.diamm.ac.uk/reports/Appx01.zip

Appendix 2

Back-end database and Website developments:

http://www.diamm.ac.uk/reports/Appx02.pdf

Appendix 3

Expert usability report:

http://www.diamm.ac.uk/reports/Appx03.pdf

Appendix 4

Working group and continuous feedback usability report

http://www.diamm.ac.uk/reports/Appx04.pdf

Appendix 5

Planned feed of new images to the DIAMM Archive and Website.

http://www.diamm.ac.uk/reports/Appx06.pdf

Appendix 6

DIAMM sustainability strategy report, prepared in April 2005

http://www.diamm.ac.uk/reports/Appx08.pdf

Appendix 7

Sustainability working group report

http://www.diamm.ac.uk/reports/Appx05.pdf

Appendix 8

Sustainability plan (Nick Dixon, ABL Consulting; Marilyn Deegan; Simon Tanner)

http://www.diamm.ac.uk/reports/Appx07.pdf

Appendix 9

Financial report

http://www.diamm.ac.uk/reports/Appx09.pdf

Appendix 10

Digital Restoration Workbook

http://www.diamm.ac.uk/reports/Appx10.pdf