

# **An Introduction to HATII, The Humanities Advanced Technology and Information Institute at the University of Glasgow**

Dr Seamus Ross, Director HATII

## **Introduction**

The Humanities Advanced Technology and Information Institute (HATII) was formed in 1997 to bring together Glasgow University's expertise in Information Communication and Technology (ICT) in the arts and humanities and cultural heritage sector. HATII's mission is to:

- conduct innovative research into the use of information and communication technology (ICT) within the humanities, archives, libraries, and museums,
- lead learning and teaching in Arts and Media Informatics, often referred to as Humanities Computing,
- build and support a user community adept at the creation and use of online resources,
- assist in the creation and preservation of electronic resources and to encourage their integration into teaching and research,

These activities are led by three teams: Research and Teaching Group, The Resource Development Team, and the Arts Technical Support Group. All three groups are tightly coupled and there is overlap between several of the groups (e.g. members of the Resource Development Team contribute to teaching and collaborate on research projects). HATII's key activity areas are its:

- ◆ extensive research programme;
- ◆ undergraduate degree programme in Arts and Media Informatics;
- ◆ Postgraduate programmes of study at masters and doctoral levels and its contribution to other postgraduate programmes in the University such as the MscIT run by Computing Science;
- ◆ promotion of collaborative research projects within the Faculty of Arts;
- ◆ support for the development and use of computing in learning and teaching within the Faculty of Arts;
- ◆ responsibility for the development and management of the departmentally based teaching laboratories for the Faculty of Arts;
- ◆ provision of desktop and server support to Faculty of Arts staff, postgraduates, and undergraduates; and,
- ◆ initiating and running conferences, summer schools, and short courses.

The research and teaching (e.g. course development) team consists of eleven academic staff and Senior Research Fellows drawn from the Archives, Information Systems, and the Library arenas. The academic staff are Prof Arthur Allison, Dr Ian Anderson, Prof Michael Moss, Adele Redhead, Dr Seamus Ross, Dr Susan Stuart. The five Senior Research Fellows (Dr James Currall, Claire Johnson, Dr Stephen Rawles, Lesley Richmond, Alistair Tough) hold other appointments in the University but also contribute RAE quality research through their membership of HATII. All

academic staff and Senior Research Fellows contribute to teaching on our new MPhil in Digital Preservation and Information Management.

## **Research**

### *Ongoing Research*

HATII's research concentrates in the areas of technologies, methods, and theoretical developments that enable (a) access—by combining context and hierarchy with interoperable metadata to improve information management and use, (b) content analysis and appraisal—by exploring the applicability of the records continuum paradigm, of the functional analysis of information systems and re-examining basic assumptions about archival theory and practice in the light of knowledge management, (c) evaluation and impact methodologies—for the use of digital resources in research, and (d) preservation—by developing, and evaluating techniques and technologies and defining strategies that provide curators and content owners with access to best practice guidelines and appropriate technology services.

HATII currently runs six major research projects.

- (1) It is home for Glasgow's contribution to the *Digital Curation Centre*, a three year multi-million pound development supported by the JISC and the EPSRC to improve the curation of digital materials (<http://www.dcc.ac.uk>). The partnership is led by the National E-Science Centre in Edinburgh and includes Glasgow, CCLRC, and the UK Office for Library Networking (UKOLN) in Bath.
- (2) It is the lead site of the *Digital Preservation Cluster*, one of the seven clusters that make up the DELOS NOE (FP6 G038-507618). The DELOS network of excellence, which is funded by the European Commission under the 6<sup>th</sup> Framework Programme, is the leading digital library research initiative in the world;
- (3) It is the lead site for *ERPANET* (Electronic Resource Preservation and Network) (IST-2001-32706) the European Union FP5 activity to enhance the preservation of cultural heritage and scientific digital objects (<http://www.erpanet.org>). A three year 1.2 million Euro project that began in November 2001 and is a partnership between Glasgow, the Dutch National Archives, the Swiss National Archives, and the University of Urbino. ERPANET raises awareness and builds capability in the area of digital preservation across Europe through seminars, developing tools, and conducting primary research;
- (4) It is a core partner in *The Digital Culture Forum* (DigiCULT Forum, IST-2001-34898), which monitors and assesses technological research and development and defines how they can be effectively deployed in the heritage sector (e.g. museums, libraries and archives). Through its research DigiCULT develops knowledge about how new technologies can be used to improve management, access and understanding of the cultural heritage. Its major Technology Watch Reports were published in March 2003 and March 2004, with a third one forthcoming in December 2004. (<http://www.digicult.info>);

- (5) It is home to the New Opportunities Fund Project (NOF) that is constructing the technological environment and the facilitating the research environment that is promoting the building *TheGlasgowStory* (<http://www.theglasgowstory.com>). The design of the whole project has proved to be an ideal model for the presentation of heritage material to a wide audience; and,
- (6) It has a major collaborative research project, *Primarily History*, with the School of Information and Library Science University of North Carolina (Chapel Hill) funded by the Delmas Foundation investigating: How do historians locate primary source material? What do they teach their students about locating primary source material? How do archivists produce online finding aids? What do they do to promote and educate their users about using electronic finding aids? This work is based on survey and interviews.

Among our smaller projects is the development of the technical services that underpin the creation of a database of the artistic work of Andy Goldsworthy, developing interactive teaching applications (e.g. Other Europes, GLAADH, and PATOIS), and in each of the last five years HATII has conducted one innovative project in VR. These have investigated technological, methodological, and user needs evaluation issues and how these tools can be used for research.

This research is carried out by academic staff and their dedicated teams of research assistants including Brian Aitken (DigiCULT & TheGlasgowStory), Daisy Abbott (DigiCULT), Joy Davidson (ERPANET & The Digital Curation Centre), Martin Donnelly (DigiCULT), Peter McKinney (ERPANET, DELOS), Adam Rusbridge (ERPANET), and Ian Russell (TheGlasgowStory).

#### *Completed Projects*

Recently completed projects include: (1) the NINCH Guide to Good Practice in Digitisation (<http://www.ninch.org/guide.pdf>). (2) With funding from the UK's Joint Information Systems Committee (JISC 5/99) HATII is managing the 'Developing the Collection of Historical and Contemporary Census Data and Materials into a Major Learning and Teaching Resource' (CHCC project) (<http://www.chcc.ac.uk/>). (3) HATII was a co-investigator in InterPARES I which was a major project to investigate electronic records management led by the University of British Columbia (<http://www.interpares.org>).

#### **Teaching**

HATII offers some twelve undergraduate modules at introductory and honours level in humanities informatics and 2003-4 saw the launch of our joint honours MA(Honours) programme in Arts and Media Informatics. Our Level 1 and Level 2 courses introduce students to the ways that information communication and technology change how we can create, store, investigate, and disseminate work in the humanities. Our joint honours programme includes modules in *Data Modelling and Representation, Multimedia Analysis and Design, Arts Informatics, Document Encoding, 2D Digitisation, and Investigating Cyberspace: The Anthropology of Cultures and Communities of the Net*. A number of Arts Departments have also integrated several of our modules into their honours programmes. These include:

*Multimedia Analysis and Design and Investigating Cyberspace: The Anthropology of Cultures and Communities of the Net.*

*Two Course Case Studies:*

The *Multimedia Analysis and Design* honours module attracts students from Archaeology, History of Art, Theatre, Film & Television, and Music. The module allows students to develop visual and aural critical and analytical skills. It introduces students to interactive media and design theory as well as non-linear hypertext representation - multiple, non-exclusive pathways. In acquiring these skills students develop, manage and produce a multimedia project based in their primary area of study. These projects are available online and some of them have provided an opportunity for students to produce works of intellectual rigour and creative design.

*Investigating Cyberspace: The Anthropology of Cultures and Communities of the Net* is an honours module designed to provide students with a way to understand the socio-cultural context of cyberspace through developing an understanding of range of issues (e.g. online persona formation and use, public vs private space) gaining expertise in methodologies and theories for studying cyberspace, and allowing students to conduct primary and original research. Students have produced studies of community formation, the role of gender in the cyberspace, the role of language in identity formation and representation, and the examination of imagination in community life. This module has also resulted in an academic paper (McKinney, Sharp and Ross 2003).

At postgraduate level HATII offers an MPhil in Information Management and Preservation Studies and contributes to the University of Glasgow's MSc(IT) in Information Technology modules on cultural informatics. On the MSc(IT) course we manage the humanities strand and contribute four modules: *Introduction to Cultural Heritage Computing, 2D Digitisation, Document Encoding, Multimedia Systems* (co-taught with staff from Computing Science). Our MPhil, which is being run as a CPD course, will provide HATII with a conduit to the professional community and a training ground for potential doctoral students. The interlocking nature of modules is demonstrated by the fact that masters level modules run under one stream are offered under others. For instance, Seamus Ross' module on Electronic Records (*Management, Curation & Preservation of Digital Materials*) is offered both under HATII's MPhil programme and Computing Science's MSc(IT) course.

### **Resource Development Services**

HATII is home to the Faculty's four resource development officers RDO's who develop the use of ICT in Arts and Humanities research and teaching within the Arts Faculty at Glasgow. They have sectoral responsibilities to ensure the provision of ICT support for learning and teaching, to contribute to Level 1 and 2 teaching in Arts Faculty Departments and on Arts and Media Informatics modules and to support the technical design and delivery of research projects. The HATII RDOs support work in Music and the Performing Arts (Andrew McHugh), English Language and Literature (Jean Anderson), Modern Languages (Stephen Woodruff), and History and Archaeology (Ann Gow). The Faculty of Arts at Glasgow is home to more than twelve projects involving the use of ICT in the humanities, and these are supported by

its own (RDO). The RDOs work with academics in departments to develop further research funding applications that involve the use of ICT. Four of them have Computing Science backgrounds of which three are to masters level. There efforts are often supplemented by staff appointed to work on *ad hoc*, usually externally funded, initiatives such as Patois, GLAADH, A2PAW.

RDOs are essential in achieving high standard, quality provision of ICT resources in learning and teaching. There is, though, still resistance to takeup of ICT in some Arts areas. With ‘an enthusiastic lecturer an RDO can help them to achieve great success...but where there is resistance,’ RDOs often find it better to focus on ‘on simple provision, such as on-line class handouts.’ Where it is possible to enable the creation of online learning materials in collaboration with lecturers the RDOs do this. The RDOs have a very good track record in creating learning materials and assisting with research.

### **Arts Technical Support Team**

The Arts ICT Support Team of four dedicated professionals is based in HATII. They support and assist in the development and use of computing in teaching within the Faculty of Arts by academic and non-academic staff and both undergraduate and post-graduate students. Its team provides desktop support for over 350 staff users in the Arts Faculty. They have responsibility for overseeing the development and management of the departmentally-based teaching laboratories and computer classrooms for the Faculties of Arts currently this includes fourteen undergraduate open access and teaching computer laboratories and it supports three postgraduate services. In total they look after over 600 desktop computers (350 staff desktops and 260 laboratory machines). 70% of these machines have 100MB access. We also have seven servers to provide services, data storage (currently just over a terabyte) and web delivery mechanisms. The team manages purchasing of equipment and the provision of advice on the purchasing of equipment including quotes from external retailers for Arts Faculty Departments. They handle the installation of the hardware and software for staff in the Faculty of Arts and their maintenance and report.

The Arts support team supports most of the specialist software and generic applications (e.g. iCampus) that is used by staff and students within the Faculty. It provides essential backup services for the Arts Faculty and has proven its ability to restore data from the tape archive within 1 hour of request provided the request is received Monday after 8am and Friday before 4pm. They deliver extended storage space postgraduate and undergraduate students in the Arts Faculty who are undertaking projects or research that requires substantial digital storage facilities. Key to the delivery of services is our online job request submission system which allows staff and students to submit jobs via a web form and to track progress of their support requests online. While not all requests for support come in to the team in this way more than 70% do. It has made us more responsive and transparent.

### **HATII's Home: George Service House**

HATII's home George Service House (GSH) is a state-of-the-art research centre. GSH has three multimedia laboratories (30, 15, 12 seats respectively), and dedicated space and facilities for virtual reality, CAD, digitization, and digital preservation research. The Centre has access to several terabytes of data store, industry standard backup services, and access to high speed network services. Since 1997 more we have

secured more than 200,000 GBP worth of investment in the development of George Service House. A further 185,000 GBP of SRIF2 monies will be invested during 2004-5 in enhancing HATII's research infrastructure (in particular giving it the capacity to conduct research into repository design and development). In addition, HATII's technical staff manages more than 500 desktop computers and support 250 members of academic staff and 4500 students in the Arts Faculty. HATII makes use of University's Access Grid services.

#### **CPD and Conferences:**

In 1998 HATII launched the first Continuing Professional Development (CPD) programme in the United Kingdom in *Digitisation for Cultural and Heritage Professionals*; it is now internationally recognised as the leading course in this area. Since its launch we have offered this module twice each summer in Glasgow. The module has been so successful that we have run it in a number of overseas locations New Zealand (2002 and 2003), Crete and Bulgaria (2001), and the US (in 2000 and 2001 in Houston and in 2002, 2003, 2004 at the University of North Carolina). While the module has enabled us to share our research into digitisation (see for example S Ross et al 2002) with hundreds of professionals from libraries, archives and museums, it has also led to research collaborations between HATII and other institutions most notably the top North American School of Information and Library Science at the University of North Carolina (Chapel Hill).

Staff have hosted conferences, the third annual *Digital Resources in the Humanities* (DRH'98) Conference (September 1998), *CHArt99* (Computers in the History of Art), in 2000 HATII staff hosted the *ALLC/AHC Conference, Archaeological Informatics: Beyond Technology Workshop* (September 2001 in conjunction with Archaeology) and in 2003 we hosted *Computers in Philosophy*. Under the Digital Curation Centre and in conjunction with the DELOS Project we are leading the development of a continuing professional development programme in Digital Curation and repository development.

Dr Seamus Ross  
Director, HATII  
University of Glasgow  
15 June 2004