Fostering Digital Humanities Research Collaborations with Computer Science

UMRI Pump Priming Call Proposal

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Investigators

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SCHOOL OF ARTS, LANGUAGES AND CULTURES: Guyda Armstrong (Academic Lead for Digital Humanities, Faculty of Humanities)
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This proposal will support exploratory collaborations between researchers in the Faculty of Humanities and those in the School of Computer Science, with the aim of forging collaborative partnerships and establishing Digital Humanities as a research activity in the Faculty of Humanities and the School of Computer Science.

Background

The field of Digital Humanities (DH) is concerned with the intersection of computing and the disciplines of the humanities. Exemplars of Digital Humanities include the use of digital text and image archives, network analysis, text mining and information visualisation. While DH encompasses a wide range of activities, a key aspect is that of "direct, practical, uses of Computational methods for Research"[1] or *building*, as advocated by Stephen Ramsay:

> *Personally, I think Digital Humanities is about building things. I'm willing to entertain highly expansive definitions of what it means to build something.*
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> [...]
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> *But if you are not making anything, you are not – in my less-than-three-minute opinion – a digital humanist. You might be something else that is good and worthy – maybe you're a scholar of new media, or maybe a game theorist, or maybe a classicist with a blog (the latter being very good thing indeed) – but if you aren't building, you are not engaged in the "methodologization" of the humanities, which, to me, is the hallmark of the discipline that was already decades old when I came to it.*

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Stephen Ramsay, University of Nebraska[2]

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DH activity within the University of Manchester is growing. Through a series of capacity building workshops co-ordinated by Guyda Armstrong with support from the Humanities Strategic Investment Fund, the DH@Manchester activity[3] has solicited project proposals and expressions of interest for exploratory projects from the Faculty of Humanities – referred to here as *DH capacity building projects*. A further call for project proposals and accompanying workshop will be held towards the end of 2015 as part of DH@Manchester. While a number of these existing DH capacity building projects are being undertaken with the support of Research IT, there are others that would benefit from closer collaboration between the Faculty of Humanities (FoH) and Computer Science (CS), in particular where expertise and innovation in areas such as image analysis, text mining or knowledge management are required.

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[1] https://www.hastac.org/blogs/cforster/2010/09/08/im-chris-where-am-i-wrong
[2] http://stephenramsay.us/text/2011/01/08/whos-in-and-whos-out/
[3] Current development space: http://humdigi.cmsstage.manchester.ac.uk/

Project Description

Each year the School of Computer Science seeks to provide opportunities for summer work for undergraduate students in a variety of projects areas[4]. Past projects have targeted public engagement, teaching support and local information systems. The aim of these vacation projects is to produce useful work and provide students with experience of their developing computer science skills. This proposal will employ a pool of Computer Science vacation students to assist in the execution of selected DH capacity building projects. This work will be undertaken in the seven weeks following the end of term in June 2016.

The use of vacation student effort gives a lightweight mechanism for exploration of computer science issues in a DH setting. For many DH capacity building proposals, the technical skills required are well within the scope of Undergraduate Computer Science students. A vacation project provides opportunity for initial collaborations or partnerships between FoH and CS with a low cost to the academics involved. In addition to Ramsay's comments above on the nature of DH being about *building things*, the construction of a concrete system can often help expose and focus on wider issues of research interest.

Interdisciplinary Aspects

Digital Humanities is, by its nature, an interdisciplinary activity requiring both domain, technical and computational expertise.

Engagement from Humanities is already clear with the submission of proposals to the DH capacity building call. The following School of Computer Science staff have already indicated their interest in participation: Sean Bechhofer, Simon Harper, Toby Howard, Caroline Jay, John Keane, Goran Nenadic, Bijan Parsia, Steve Pettifer, Robert Stevens, Markel Vigo, and Xiaojun Zeng. These staff cover a number of research areas including text mining, data analytics, human factors, knowledge representation, data mining and visualisation.

The benefits to those participating from the Humanities are clear, as proposals target a specific need. For Computer Science, the benefits come in the application to new domain settings and the potential of new research avenues being stimulated by those new application settings.

The proposal can be seen to be complementary to other strands of activity in Digital Humanities. It is distinguished from that activity by its focus on a Computer Science perspective.

Process

The following process will be used to manage the development and execution of projects. This process will be overseen by a Steering Group consisting of Bechhofer, Stevens, Armstrong and Haines.

  i A call for project ideas will be issued in December 2016. This can be tied in with existing DH activity, in particular the DH workshop scheduled for early December;

 ii Project proposals will be compiled into an online "project book";

iii In early March 2016, a workshop will be held in CS to bring together interested CS and FoH researchers. Peer review during the workshop will help prioritise proposals in terms of their feasibility, technical requirements and availability/interest of appropriate staff. Ideally, projects should be associated with at least two staff members from CS.

 iv Project opportunities will be advertised to students by the Easter break. Interviews and selection of students to be done by May 2016.

  v Project execution will take place in June and July 2016.

 vi A wrap-up workshop will be held towards the end of the summer. Each project will be required to present results and outcomes. Projects will also be required to produce a poster and blog post for the DH@Manchester gallery and Computer Science web sites.

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[4]http://www.cs.manchester.ac.uk/study/undergraduate/vacation-students/

The use of casual effort to develop systems raises questions of product *sustainability*. We note, however, that the primary intention here is not to build systems *per se* but to use the construction of those systems as a means to foster sustainable partnerships – useful software products are a useful side-effect and bonus. As a founder of the Software Sustainability Institute[5], the School of Computer Science would strive to ensure that any software development would be in line with SSI principles and thus in a sustainable position when the software is further developed. Haines is also an SSI Fellow[6] and a member of the UK Research Software Engineering executive[7] with a particular focus on the production of maintainable, usable and well-tested software systems for reproducible research.

Costs

A total of £16,250 is requested from UMRI. A weekly costing for an Undergraduate vacation student in the School of Computer Science is approximately £450 (paying at a grade 2 level). A seven week project running from 13/6/16 to 31/7/16 would be £3,150. We request funds for up to five students, a total of £15,750. We also request £500 to cover catering costs for two workshop style events: an initial workshop for project proposal development and a wrap-up "show and tell" for dissemination of results and experiences.

Expected Outcomes

Short Term: In the short term, a success indicator will be the engagement with staff in the School of Computer Science and the satisfactory completion and dissemination of the selected projects.

Mid Term: Longer term indications of success would include further detailed student projects (at both UG and MSc level), joint publications and community building activity such as the formation of a Digital Humanities Club[8].

The activity proposed here is largely about community building and bringing together academics from FoH and CS in order to exchange ideas. We will follow-on with a grant-writing workshop or sand-pit in Autumn 2016, with the intention of using the results from the initial projects to develop one or more major grant applications in Digital Humanities as outlined in the FoH Digital Humanities Workplan of October 2015.

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[5]http://www.software.ac.uk/

[6]http://www.software.ac.uk/fellowship-programme

[7]http://www.rse.ac.uk/

[8]http://www.itservices.manchester.ac.uk/research/services/collaboration/clubs/