Martini

FINAL EVALUATION REPORT

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INTRODUCTION

This report forms the final deliverable from the Martini evaluation team at the Centre for Research in Library and Information Management (CERLIM). CERLIM's involvement in Martini is in the role of external evaluator, with a remit to monitor and report upon the process and progress of the project, the quality of the products, and the impact of the project upon local users and the wider community.

Monitoring and evaluation activities undertaken by CERLIM have included contact with the Project Officer throughout the duration of the project. Advice and support has been provided on request with regard to user testing activities, through informal meetings, telephone and email contact. CERLIM has been represented at all project Steering Group Meetings.

This report covers

- Evaluation of whether the Martini system has met its initial aims and objectives
- Evaluation of the progress and processes of the project
- Evaluation of the impact of Martini upon students and staff at UEA

Section 1. REALISATION OF AIMS AND OBJECTIVES

The Martini project is one of four funded to provide 'Joined up systems for learners'. Within this context, Martini has three main objectives.

Objective 1.

To provide an integrated information delivery service for students; to deliver what students need, where and when they need it; and as such to become the focus of student access to institutional information systems.

In terms of objective 1 above, Martini has undoubtedly been successful. A Martini product has been launched at UEA within the project lifetime, and although the volume of usage and feedback from students was initially modest, the positive comments have consistently outweighed the negative. Even a short, simple mailshot survey elicited comments such as '*I think it is a good tool*' or '*A good way to keep up with invoices*'. The system demonstrably proves capable of delivering a range of student's personal data in a stylish and integrated way, is easy to use, can be adapted to meet their expressed requirements and can be navigated without difficulty. Students are able to access the system both on and off campus (assuming they have the means to do so) and it is available to them 24/7.

Consideration has been given to less able students by the provision of options to enlarge text, and by making sure that Martini complies with UEA accessibility standards. It will

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be possible to customize the appearance of the Martini interface through a choice of style sheets, which will also enable transformation to VoiceXML.

In addition, it will be possible to adapt institutional data for delivery to mobile phone, PDA and other devices through WML technology, should this become a user requirement.

There is a subtle difference between delivering 'what students need' and 'what the developer / supplier thinks students need'. A baseline product was developed from the latter viewpoint and presented to students. However, it is particularly commendable that the project team have taken considerable care to ask students not only what they think of what has been presented to them, but what other needs they have. The team have solicited a good cross section of student opinion and have found that their assumptions of students' needs and priorities were not always correct. Although it has not been possible within the project timescale to redevelop Martini in the light of student feedback, the case studies have provided clear indications of a way forward to fulfilling user needs.

Whether Martini should become the 'focus of student access to institutional information systems' is now questionable. Since the decision to adopt uPortal as UEA's 'focus of access' it seems more likely that Martini will become the 'personal data channel' alongside a range of other institutional information systems being delivered under the umbrella of a student portal. This does not detract from the value or profile of Martini, but is rather an indication of the evolution of technology and strategic thinking over the project lifetime. It should thus be regarded as a positive achievement and one which demonstrates the project team's flexibility to changing requirements and operating environments.

Objective 2.

To provide a framework which can be reused at any institution to enhance the student experience.

In order for another institution to reuse Martini successfully, the product must be sufficiently generic technically, with clear and adequate documentation, and if possible backed up by a support system. The framework is embodied in key project deliverables, including the IMS-Generator and its Description document, the technical paper which explains the generic solution developed by the Martini project. It is clear that Martini works at UEA. To what degree it will ultimately be 'transferable' is less clear as yet. The original intention was to demonstrate 'reusability' by embedding Martini at another institution, and thus showing that Martini could cope with environments and data structures different from those found at the University of East Anglia. This ability is important as it is an indicator of success in achieving JISC's Programme aim of sharing results of 7/99 projects across the HE/FE sector.

In the event, other work took precedence in the latter stages of the Project, but a good degree of transferability testing had already been done in the course of developing the system itself. MARTINI has run successfully within several operating environments including Linux 9.0 Redhat, Solaris (Sun), and Windows 2000/XP. It also has accessed and presented data in Intel Image, MySQL, DB2 (within the WebObjects iteration of the system), HSQL (Hypersonic SQL), and PostgreSQL. Simulations of other institutions have been created and have proved successful.

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Full documentation of system working within these environments and data structures will be part of the final deliverables of the Project and will be made available to the wider community.

An issue which might need to be resolved is support for new institutional users. It is unclear who would provide such support if Martini were to be offered to the community, and JISC may need to address this. Having said this, it is important to recognise that other institutions will be able to learn from the experience of the Martini team (provided a mechanism can be found to support this) even if they do not use the full "Martini system". Since the broader information environment has also progressed towards the embedding of information access within a varied range of portals, it is likely that this experience is and will continue to be valuable. It is also worth noting that uPortal is gaining a significant market share among UK institutions.

Objective 3

To develop a Web-based front end and a set of tools which will allow the integration of a range of institutional information systems. It will be database-driven, to include both static data (e.g. course guides) and dynamic data (e.g. course marks, accommodation information etc.).

The IMS-Generator Description Technical Paper describes the generic solution toolkit which facilitates the retrieval of records from multiple databases, and their presentation as a set of HTML pages. The solution is standards driven, being based upon the IMS Enterprise Personal Object Model, and has overcome two challenges. Firstly it is noted that much work had to be done to create extensions to the standard to cover the whole set of information which any institution holds about its students.   The existing standard supplied only about 10% of the metadata fields required. It is not yet clear whether the extensions devised at UEA will be universally adopted, so further iterations of the Martini software would need to take account of emerging standards. Secondly the Generator had to be capable of handling the diversity of systems and architectures to be found in 'home-made' and proprietary institutional databases.

The resulting document which has been produced for the community explains the process which an institution would need to go through, from initial mapping of institutional database structures to presentation of data to the student. It is evident that at UEA the IMS-Generator has performed well. Both WebObjects and uPortal versions of Martini have been produced and clearly work, the uPortal version being an addition to the original project plan. A variety of institutional databases have been accessed, and the personal data of individual students can be extracted from these and presented through the two web interfaces in an integrated fashion.

Summary

It is clear therefore, that Martini has achieved its main objectives. It has proved that institutional systems can be 'joined up' and presented to learners as a web-based front end. It has been tested with a range of operating environments and presentation layers.

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The true test of its transferability will be when other institutions take up the Martini product and attempt to use it as their institutional system, without the background of learning and familiarity which the project team have accumulated over the past months. The team is confident that this will be achievable.

Section 2. PROJECT PROCESS AND PROGRESS ISSUES

2.1 Project management methodology.

A modified PRINCE2 methodology was adopted for the Martini project. This provided scrupulous documentation throughout all stages of the project plan, and recorded changes in direction agreed by the Steering Group, or at stage boundaries. If anything an overabundance of paper was generated for some Steering Group Meetings, which was difficult to digest, and from which it was not always easy to extract key information. We would suggest that it would be useful for JISC to provide guidance on appropriate and efficient project management methodologies, so that the method chosen is a support but not a hindrance.

2.2 Involvement of key groups

- **Steering group** - the core Steering Group consisted of key UEA managers and the Director of CERLIM, with other representative staff by invitation. Despite meeting dates being agreed some time in advance, it proved difficult to get everyone together on several occasions. An attempt to hold a 'virtual' meeting consisting of the distribution of documents and exchange of views by email was not well received, and would only be recommended as a 'stop-gap' measure. Video-conferencing was used on two occasions and proved successful, particularly in view of the travelling distance between Manchester and Norwich!

  Steering Group meetings were well attended and managed, and provided a valuable discussion and decision forum.

- **Data providers** – initially it was intended that these would be a discrete group which would meet from time to time throughout the project, and which would be represented on the Steering Group. The intention was to ensure that current 'guardians' of data would have full involvement in the process from the outset. They would be given the time and opportunity to reflect upon the impact which a Martini-type system might have on how they managed data in the future, and could flag up any legal or security issues at an early stage. It proved difficult to convene the data providers group, and in the event approaching individuals with particular issues in a timely fashion was more successful than seeking group decisions.

- **Data users** – again it was envisaged that a distinct group of student 'users', with the addition of a staff member representing the needs of less able students, would be involved throughout the project. Martini aims to improve the student experience, and therefore students' views on the system are key to measuring its success. However despite considerable effort on the part of the project team it proved impossible to engage a consistent group of students throughout the lengthy project lifetime. For the first two case studies, student numbers were small, though a great deal of useful information was gathered from the few who did participate. The third case study easily attracted students in greater numbers because a financial reward was offered. This need to pay students for their participation has been reflected in other projects and is a message which future projects may need to take on board.

- **Teaching staff** – It was not intended that teaching staff would provide direct input into Martini's development. However, as the dissemination programme began to raise awareness among the non-student community, it emerged that they too were interested in Martini, and thought they would find it useful. Teaching staff already have access to some students' personal data through a variety of institutional online and paper based systems, but both UEA and JISC may wish to consider teachers as users, perhaps giving thought to a 'teacher's portal interface' or 'teaching staff information needs' as an area for study in the near future.

- **Administrative staff** – Again, these were not identified as a discrete group who would contribute to the project, but it is noteworthy that when weekly 'showcase' sessions were organized and advertised, the response from school and departmental administrative staff significantly outstripped that of students, and Martini was received by them with enthusiasm. It is noted that the Martini team intend to include administrative staff in future user testing.

2.3 Summary

Despite strenuous efforts on the part of Project Office staff, a major difficulty throughout the project has been engaging and sustaining the interest of some stakeholder groups. This is perhaps unsurprising in a project which was first funded in April 2000, and will complete over three years later at the end of June 2003. In particular, students are a transient group with other priorities than helping to develop long-term institutional systems. The most successful way of enlisting the help of a large number of students was to offer a financial incentive. For particular issues, it sometimes proved more productive to 'network' by approaching individuals rather than try to convene a flagging group.

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Section 3. Communication and dissemination

The project team at UEA appears to work together very well and displays an appropriate range of skills and expertise to ensure the success of the project. Communication between project members and the evaluation team has been excellent. The Project Officer in particular has responded to every request for information and assistance very quickly and patiently, and, for example, helped facilitate stakeholder interviews in the early stages of the evaluation.

Dissemination within UEA has been managed through the user groups with varying degrees of success, and through 'Showcase' sessions for staff and students.

Dissemination to the wider community has been managed by various means.

- The Martini website was created at an early stage as a key dissemination route. The News, and Documents pages were particularly well-maintained, though the Publications and Demonstrator pages were not.

- Bulletins were produced monthly or bi-monthly throughout the project and placed on the website. The bulletins are clearly written, interesting and informative, and enable any interested party to trace project development. In particular, they present technical issues to a non-technical audience. They could be used as an example of good practice for other projects (although we are aware that some do use similar products).

- Attendance at conferences and seminars has taken place throughout the project, and has helped raise the profile of Martini.

Section 4. Case Studies

The case studies were the vehicle for user testing of the system. Three case studies were carried out; a lengthy study in May 2002, a brief mailshot of existing users in May 2003, and a detailed study in June 2003.

4.1 Case study 1.

The first case study was an evaluation of the prototype system, which was carried out at a single group session in a 'laboratory' setting. Participants were asked to work through a structured questionnaire in three sections; Presentation and General Use, Functionality, System Use and Future Development, with a further Free Comment section.

The case study was competently and thoroughly carried out and a comprehensive report was produced. The main problem was that the number of participants was small - a reflection of the general difficulty in engaging student volunteers mentioned above – and cannot therefore be indicative of the general student population. However, the results

did provide evidence of user needs and preferences, and areas of concern, which informed the developing system.

4.2 Case study 2

To extend these results, a brief mailshot survey of existing users was carried out in May 2003, some months after the product launch.   This did not match the breadth or depth of the first case study, but instead asked short simple questions. Again, the percentage response was not large, but it was clear that the majority of students thought the system easy to use, and were able to find what they were looking for.

4.3 Case study 3

The third case study in June 2003, was not carried out as originally planned. The timescale for the study was quite lengthy, with planning beginning in October 2002 and a rigorous and complex research methodology envisaged. In the event this did not happen largely because the difficulty of engaging the User Group to assist in the creation of realistic scenarios proved an insurmountable obstacle.   An alternative approach of targeting all returning students with an online questionnaire (plus a financial inducement!) was tried. The questionnaire was comprehensive but simple to complete, and quickly elicited the desired response of 300 students. The draft case study report is detailed and thoughtful. Among the interesting initial findings is the prime importance which students attach to system security and accessibility. Contrasting with this is the low importance they give to the presentation of their personal data, and the inclusion of pedagogic tools such as online assessment or the online delivery of coursework. Also striking is the disparity between what content students actually want and what the project team thought they would want. It is noted that the team intend to learn from the data gathered in the case study, and to use it to drive future development of the system in line with user needs. The fact that they appear to have 'guessed wrongly' does not matter in a prototype system which is user focused – though an interesting question is why commercial and other student portal providers provide information which students do not appear to want as default channels in their products.

Section 5. Implementation and Impact upon the UEA and HE/FE Communities

At this stage it is unclear what impact Martini will have upon UEA and the wider community. This is because the system will be incorporated into the institutional MLE, based upon the uPortal framework. It is likely therefore that Martini's impact will be measured and evaluated alongside that of the institutional portal. However, from the reaction of students to the developing system, it is clear that they welcome this new service, wish to use it and to interact with it. It is our opinion therefore that a Martini-type system, which is technically sound and user-focussed, would be an asset to an institutional or student portal.

The impact upon the wider community will also only be known after the timescale of the project. However, it is notable that other institutions have already embedded similar systems into their institutional portals, indicating a wish to provide this new online service for students. Considering the amount of work involved in achieving this, the Martini software could be a useful tool for the HE and FE community if its transferability becomes a reality.

A further impact will be in the wider context of institutional change, and there are already some hints of where change in current practices or new services might be needed. It seems likely that these will be common to all institutions adopting a Martini type system, or student portal.

For example, there are indications that exposing data in institutional databases to students will lead to a need for an online feedback service so that inaccuracies can be amended. Several respondents in the third case study made the point that their data was inaccurate. It seems unlikely that systems administrators will permit students to amend their data themselves, but they need to provide them with a means to do this. This may impact upon existing job roles.

There are hints too that as knowledge of the new student online information system spreads to administrative and teaching staff, these groups too may ask for similar systems aligned to their needs.   This will impact upon the institutional information strategy and will have cost and human resource implications.

Security will become paramount. Some users will be very technically knowledgeable; some less well informed than they believe themselves to be, while others may be susceptible to unfounded rumours of system insecurity. Students must be actively reassured that their personal data is safe in an online system, and this is an issue which Martini and all portal-type systems will need to address.

Section 6. CONCLUSION

As the project draws to a close, it is interesting to revisit one of the first evaluation activities which CERLIM undertook. In June 2002 a small group of key stakeholders were interviewed and asked to express their view of the challenges they saw ahead of the Martini team, and the benefits they hoped the system would provide.

The technical team appreciated that their most difficult task would be to design a truly generic system which would meet the requirements of any institution that wished to use the Martini software. They were concerned too about incorporating data from bought-in systems, though less so about systems developed in-house.

Managers' concerns centred more on political, institutional and cultural uncertainties such as whether data providers would engage with the project, or whether there was the will to embed Martini at UEA. They also thought it might be difficult to disseminate Martini across the sector in the face of a rapidly changing and growing technological environment, and competition from similar systems incorporated into vendor products.

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They were aware that student response to Martini would be key, that their expectations of University provision were changing and that unless UEA took their needs and wishes on board, their customers may go elsewhere.

In the event the technical team have successfully overcome the challenges which they foresaw, the unease about engaging certain key stakeholder groups proved well founded but has not been allowed to impede project progress, and it remains to be seen how successful Martini is across the sector. What is known is that UEA has a robust product which they can embed in their institutional systems if they wish to, that the form, appearance and content of the product is user driven and tailored to the needs of their own students rather than chosen by a vendor or service provider, and that Martini will be firmly placed within a wider institutional information strategy which should ensure that it is well supported.

To sum up, Martini had a three-fold focus:

- Provision of an integrated information delivery service for students
- Provision of a framework which can be reused at any institution
- Development of a Web-based front end and a set of tools which will allow the integration of a range of institutional information systems

From the perspective of the close of the project it would appear that useful progress has been made on all these fronts, and that integration of these foci was not ignored. An enormous amount of learning has taken place, and much of this learning will be of benefit to the JISC community when it is placed there. A product has been developed in line with the needs of UEA and its students, but which can be offered to other interested HE and FE institutions. We hope that the Martini project team see their work benefiting UEA and its students, and that it is taken up widely and successfully across the sector.