FAQs – 'The Back End'

With its innovative adaptation of library cataloguing technology to reveal the full picture of the artists, works, recordings, events and associated documentation that make up the Australian art music scene, AMC Online is a pioneer project of international significance.

This is the story of how this unique online catalogue and business model was developed.

Q. What was the main challenge for the AMC in developing its new online model?

We set out to give people online access to the whole landscape of Australian music, so we faced not just the challenge of reflecting the rich diversity of genres and styles, but also the practical problem of music existing in so many different formats: from live performances and installations, to scores and performance parts, recordings and new online media, as well as articles and reviews. There was no off-the-shelf software to suit such a diversity of categories – and tenders for custom development came in at over $1.5 million.

It was clear we were going to have to develop the data model and the software ourselves.

Q. How did you go about solving the problem?

We researched available models, and the staff at the National Library of Australia drew our attention to the Functional Requirements for Bibliographic Records (FRBR) – a conceptual model which had the potential to be adapted to our purposes. FRBR is a development of the international library community which allows for the articulation of the relationships between artistic works, their performances and sheet music editions, and the products and events in which they are featured. It also specifies the different roles that people and organisations play in these different contexts, such as composers, performers, editors, performers, conductors and publishers. The Library of Congress and other national libraries have already committed themselves to migrating their existing catalogues to the FRBR model and Australian Music Centre Online is an internationally significant pilot project in this respect, covering the breadth and depth of artistic practice well beyond the bibliographic perspective.

Q. But you still had to adapt the FRBR for AMC Online, didn't you?

Yes, to allow us to document a full picture of the Australian music scene we had to extend the FRBR model and to include entities beyond traditional bibliographic records – in addition to the more typical sorts of things that might appear on a library shelves such as sheet music, CDs or books, we developed a model that also incorporates people, events, awards and prizes. For example, the FRBR documents people and events only insofar as they relate to bibliographic entities, but the Australian Music Centre's audiences are interested in artists and calendar events in their own right – and we devised a way to include them all. We then went just a little bit further and supplemented the model to provide better access to instrumental versions of works, to digital samples and to structured biographical information of artists. Then, to avoid manually re-cataloguing our collection of over 30,000 items so they could be encapsulated in the new, more complex model, we developed sophisticated data migration routines to really flesh out the richer FRBR database.
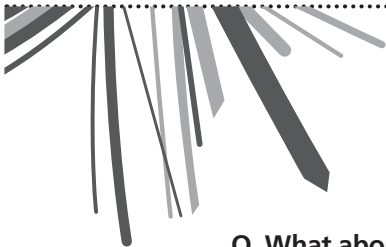
Q. What about the actual cataloguing software to manipulate the database? How was that developed?

Once we had created the database, the development of the actual cataloguing software to manipulate it began in June 2008 – and it would have been impossible without the amazing wealth of tools available through the free open source software community. Exceptionally well-documented tools such as Doctrine, an 'object-relational mapper' (an interface between a database and a programming language) enabled the quick development and integration of the different modules we developed to manage the catalogue, our contacts database, our membership database, our library circulations database, our sales inventory data and the *Resonate* magazine articles. The 'front end' website followed a similar rapid-development methodology and it continues to be fine-tuned and improved based on user-testing and feedback.

Q. So, what do you see as the main significance of AMC Online?

The main achievement of Australian Music Centre Online is that it is such an elaborate and elegant data model for reflecting and presenting the rich and diverse landscape of Australian music ... and the infrastructure it provides is just the starting point for new possibilities: from new user-interface development, to integration with other online resources, to social-network based music retrieval, and the ongoing incorporation of new genres of content.

Beyond the website it provides to promote the music of Australia's composers and sound artists, Australian Music Centre Online is an internationally significant achievement in the way it has overcome the conceptual and technical challenges inherent in the documentation and presentation of the full diversity of people, works, products, events and other aspects of artistic practice that make up the Australian music scene.

Importantly, too, the way we have incorporated commercial functionality into the site is particularly significant – AMC Online blends the very best of information management with an appropriate and sustainable commercial method for the delivery of physical and digital product to a diverse audience.

That all this was achieved in-house with virtually no IT budget is a tribute to both the ingenuity of Australian Music Centre Online, which is a small not-for-profit organisation, and the free open-source software community which helped make it possible.

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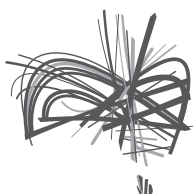
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Breaking sound barriers