

A Flexible Knowledge Management System for Field Projects

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The logistics related to our collaborative Rio Tinto project (“Progress in microbial diversity and population studies in the Rio Tinto”, Amaral *et al.*, this meeting) creates several information management issues.

The project information flow begins when researchers collect field data at the study sites. The data fall in several categories (geochemical, biological, etc.) and take various physical forms including video, text and digital imagery. The raw data must be integrated into a well-organized knowledge base to allow extraction of the synergistic scientific information content. This calls for a multimedia database that can be frequently updated by researchers in labs and at field locations on both sides of the Atlantic. In an NAI context it is also desirable that the solution promotes a collaborative culture encompassing scientific research, academic education and public outreach.

We are implementing an interactive content management system constructed from open-source components, in which asynchronous content is proactively added and reviewed by researchers. The modular approach is cost and time effective in that it allows simple customization of problem- and discipline-specific interfaces without major changes in the overall framework. We are applying an evolutionary development methodology that requires intense and frequent interaction between users and developers, as well as a frictionless, non-intrusive collection of detailed user and application metric.

The poster describes the current state of the software solution, along with a discussion of planned real-time functionalities for future field and laboratory work.