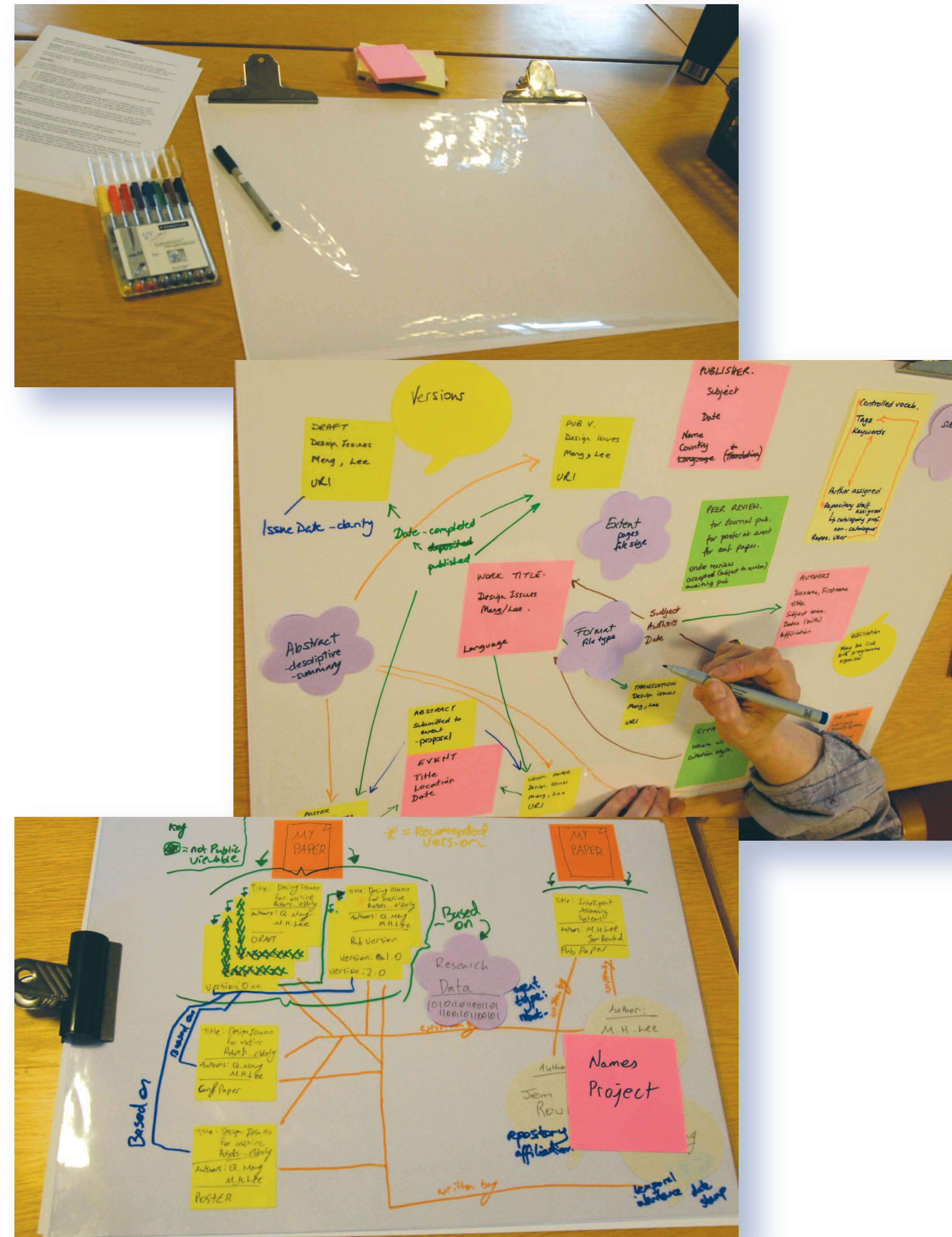


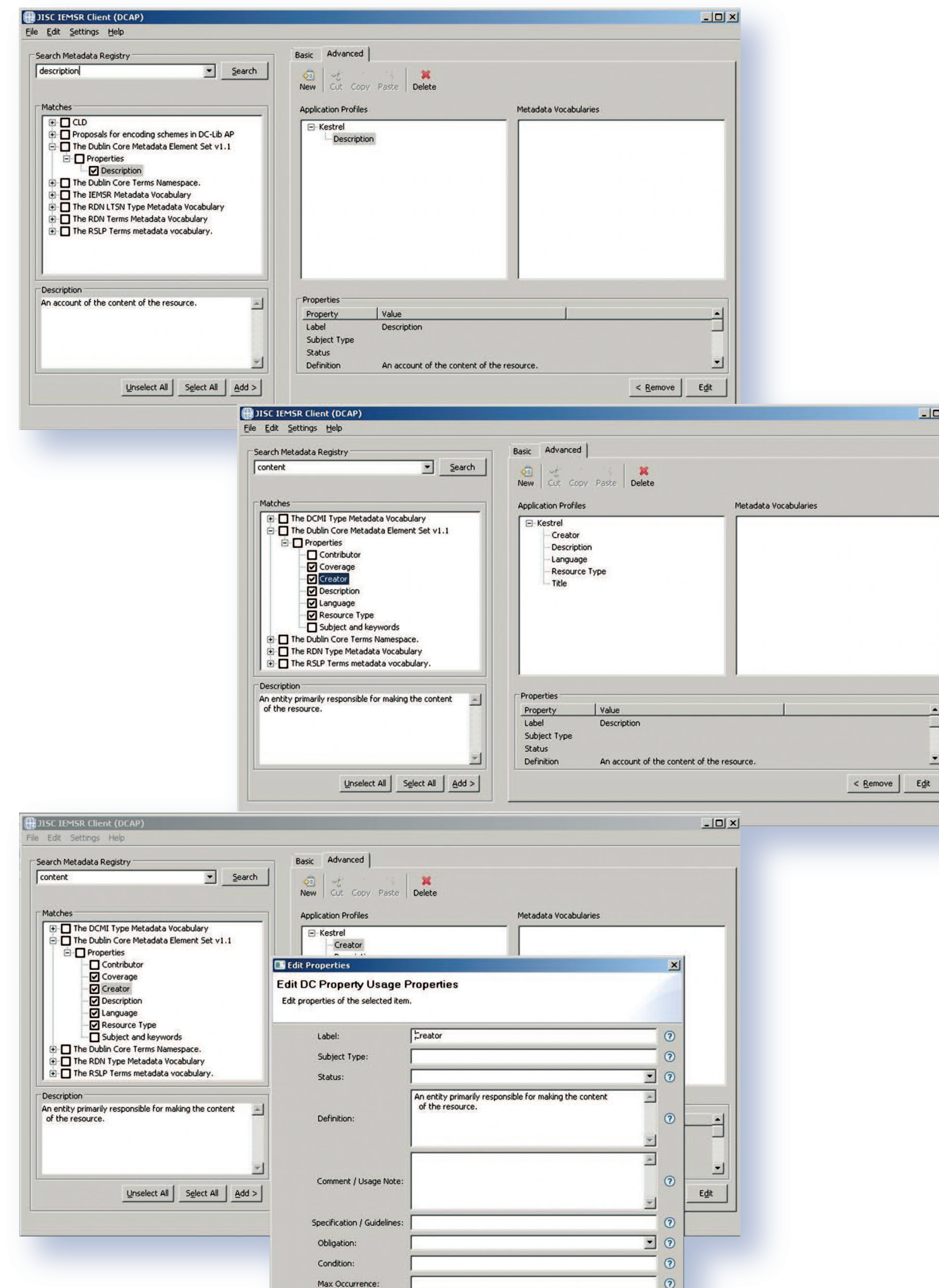
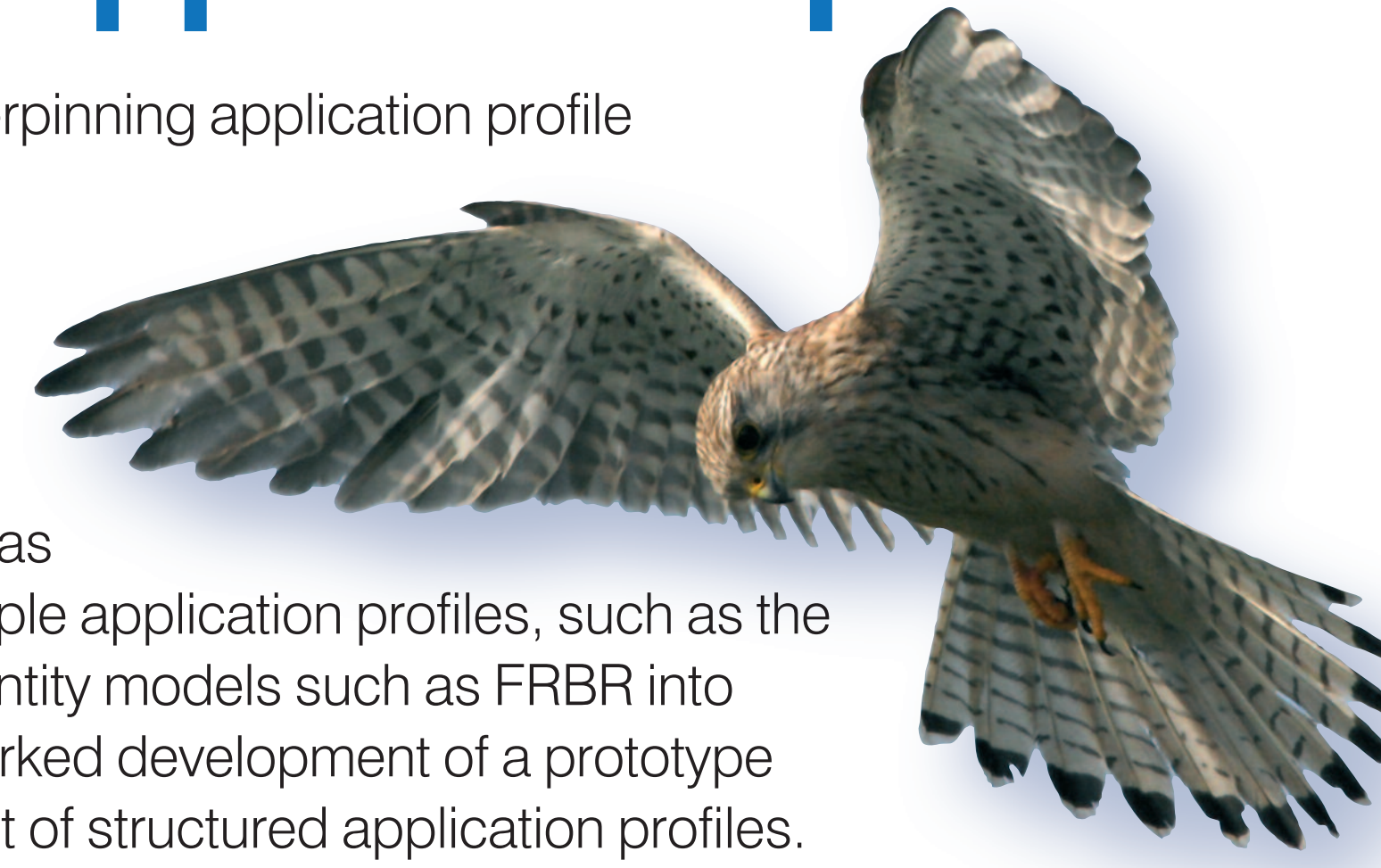
# Building metadata structures: usability engineering and evaluation

Metadata engineering is an important aspect of many projects today. Good engineering practices require effective communication between end-users, application developers and metadata development agencies – often committees. As part of the IEMSR project we have identified various ways to resolve this problem, adapting – and developing – several methods and applications for hands-on exploration of metadata structures. Some require only a piece of paper. Some make use of software interfaces for fast prototyping of novel metadata structures. The method shown below is a paper-prototyping method suitable for use as individual or group work.



# Creating new application profiles

The software engineering process underpinning application profile development is a complex one and has not received a lot of attention in the literature. A schema registry is able to become a centrepoint for this process and to support the development of an application profile. The IEMSR project has developed a stable tool for creating simple application profiles, such as the example shown here. The inclusion of entity models such as FRBR into certain application profiles has also sparked development of a prototype Web-based application for development of structured application profiles.



# Viewing and reusing data

The IEMSR began as an early adopter of various semantic web technologies, but initial development was motivated by some very pragmatic concerns; the need to provide an easy place to find information about metadata schemas, vocabularies and application profiles; to promote use of existing metadata schema solutions; to promote interoperability between schemas as a result of re-use of component terms across applications, the holy grail underlying the application profile; to reduce the amount of duplication of effort amongst metadata developers and implementers and, preferably, to provide a means to manage evolution of schemas. Storing and curating existing knowledge was and remains a priority – information about application profiles and metadata vocabulary, their creators, the processes by which they were created, and information about their development and use over time. Application profiles are expensive joint efforts in most cases, and are time-consuming and expensive to build and test. The schema registry can store the output in a human and machine-readable manner via a single standard query interface.

The Information Environment Metadata Schema Registry consists of three functional components:

- **Registry Data Server** – an RDF application providing a persistent data store and APIs for uploading data (application profiles) to the data store and for querying its content
- **Data Creation Tool** – supports the creation of RDF Data Sources (application-specific profiles) for use by the Registry Data Server
- **User Website Server** – allows a human user to browse and query the data (terms and application profiles) that are made available by the IEMSR Registry Data Server

The IEMSR project began in January 2004 and completed its second phase in September 2006. Phase 3 ran from October 2006 and is scheduled to end in August 2009.

We look towards using IEMSR as a basis for fast development of tools that are immediately useful to the user – such as internationalisation mechanisms, fast prototyping tools, analysis of existing datasets (description rather than prescription), user interface-level innovations based on IEMSR data, etc. To see the IEMSR as a standalone service and product is constrictive. It is appropriate to consider a variety of use cases including but not limited to those already identified, and workflows that contain application profile or metadata descriptions as a component. The project aims for close engagement with the developer community.



## REFERENCES

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