

Modelling Roles for eResearch

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INTRODUCTION

Last year, we ran a 'Birds of a Feather' session called 'Roles for eResearch' ^[1] at the *eResearch Australasia* conference. The motivation for the 'BoF' was the proliferation of position titles and the lack of clarity as to the scope of roles in the eResearch space. To address this, the primary goal of the session was to create a model of, and establish boundaries for, the roles in eResearch. During the session, an enthusiastic group of conference attendees worked together to execute a defined process, such that we were able to capture the scope and build some structure for a framework created from a collection of roles titles. This presentation will present a summary of the output of the session and some provides some suggestions as to how the framework can be refined.

THE 'BIRDS OF A FEATHER' SESSION

In preparation for the 'BoF' session, we had to collect role titles and define a framework within which they could be categorized. The role titles were collected from three sources: industry bodies, a community meeting of research software engineers, and through submission via an on-line form. This resulted in a list of 232 role titles, including one 'dual' role that was split into its two components. From this list, we identified 180 unique role titles. Each of these was allocated a unique identifier and printed onto a small card.

The framework was defined by the co-conveners of the session. We required a simple framework that could provide a means for the session participants to associate the role titles in broad sense. The methods we considered included categorization by:

- Deconstructing the role title into domain, level, and position (e.g. research software, senior, engineer),
- Identifying the most common keywords (i.e. research, data, software, eResearch, support, etc.), and
- The primary service the role provides to researchers.

We chose the 'services' method, because this provided a more orthogonal categorization and, therefore, left more up to the interpretation of the session participants.

The services we selected were as follows:

- **Advise** researchers about appropriate technology solutions.
- **Develop** bespoke research technology solutions.
- **Deploy** and enhance research technologies.
- **Promote** and share research technology activities.
- **Train** researchers in the use of research technologies.
- **Support** reference deployments of research technologies.

Role Modelling Process

The session was run in three phases: Discovery, Organization, and Consolidation. At start of the session, seven pieces of butchers’ paper — one for each service, and one for ‘Not eResearch’ — were distributed around the room. These provided a focus and a means of documenting the roles and their relationships. The full ‘Instructions to Participants’ is available online, along with the data from this session ^[2].

In the *Discovery* phase, each of the 180 role cards was allocated to just one of the services, or to ‘Not eResearch’.

Then, in the *Organization* phase, the participants were asked to aggregate cards and position them by their relations.

Finally, in the *Consolidation* phase, aggregations were renamed, and the relations were labelled.

Post Session

After the session, we were able to document the ids and locations of the cards on the paper, so that the efforts of the participants would be preserved. This allowed us to transfer the data into a spreadsheet for further analysis. The aggregations we called ‘capabilities’ to indicate that they were abstractions identified by the modelling session. This allowed us to record the relationships between *Services*, *Capabilities*, and *Roles* as a Neo4j graph.

SESSION RESULTS

The results are summarized below. Figure 1 shows the ‘hardcopy’ result of the session — the butchers’ paper. This paper record was transposed into a spreadsheet, and also a Neo4j graph, which is shown in Figure 2. Table 1 shows the total number of role titles that were allocated to each service and the number that were deemed to be ‘Not eResearch’. In addition, it shows the number of capabilities that were identified by consolidating roles.

Table 1: Number of Categorized Titles and Aggregated Capabilities.

| eResearch | Service | No. of Titles | No. of Capabilities |
|---------------|---------|---------------|---------------------|
| Not eResearch | - | 86 | - |
| eResearch | Advise | 21 | 4 |
| | Deploy | 11 | 6 |
| | Develop | 30 | 9 |
| | Promote | 6 | 4 |
| | Support | 19 | 8 |
| | Train | 7 | 3 |

Note:

- Two titles, which were categorized into the ‘Deploy’ service, were not able to be grouped into a capability, including: ‘Lead Bioinformatician’, and ‘Research Associate – Digital Literacy Mapping Project’.
- Two capabilities were shared across services, including: Project Management (Deploy and Develop), and eResearch Engagement (Advise and Promote).

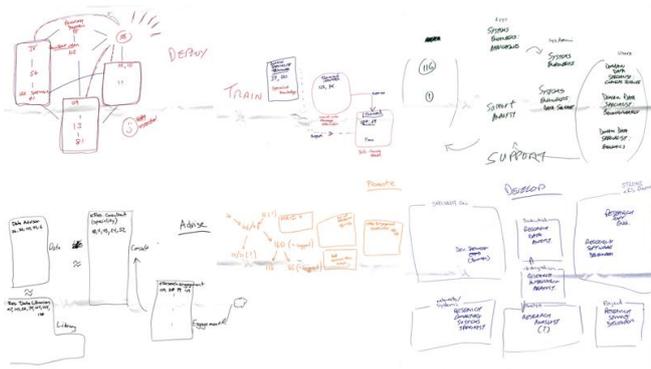


Figure 1: eResearch roles modelled on paper.

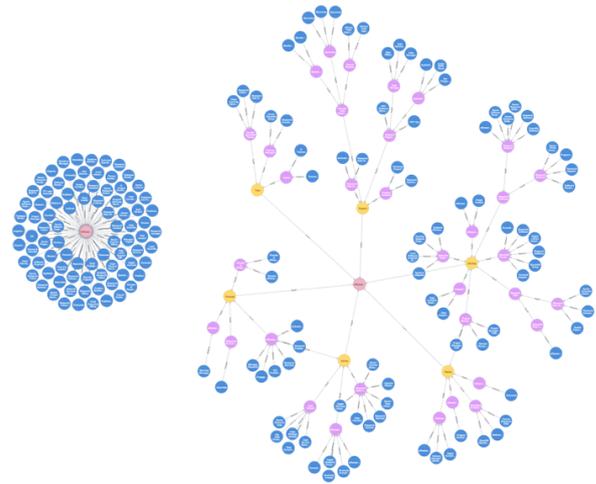


Figure 2: Services (yellow), Capabilities (mauve), Roles (blue) for Not eResearch (left) and eResearch (right).

CONCLUSION

The 'BoF' session provided an opportunity to outline the scope and structure of the roles within the eResearch space. The resulting framework — available online [2] — provides a 'first draft' of the domain and can be used as a basis for further analysis, refinement, and collaboration by the eResearch community.

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REFERENCES

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