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Determining and Visualising E-mail Subsets to Support E-discovery

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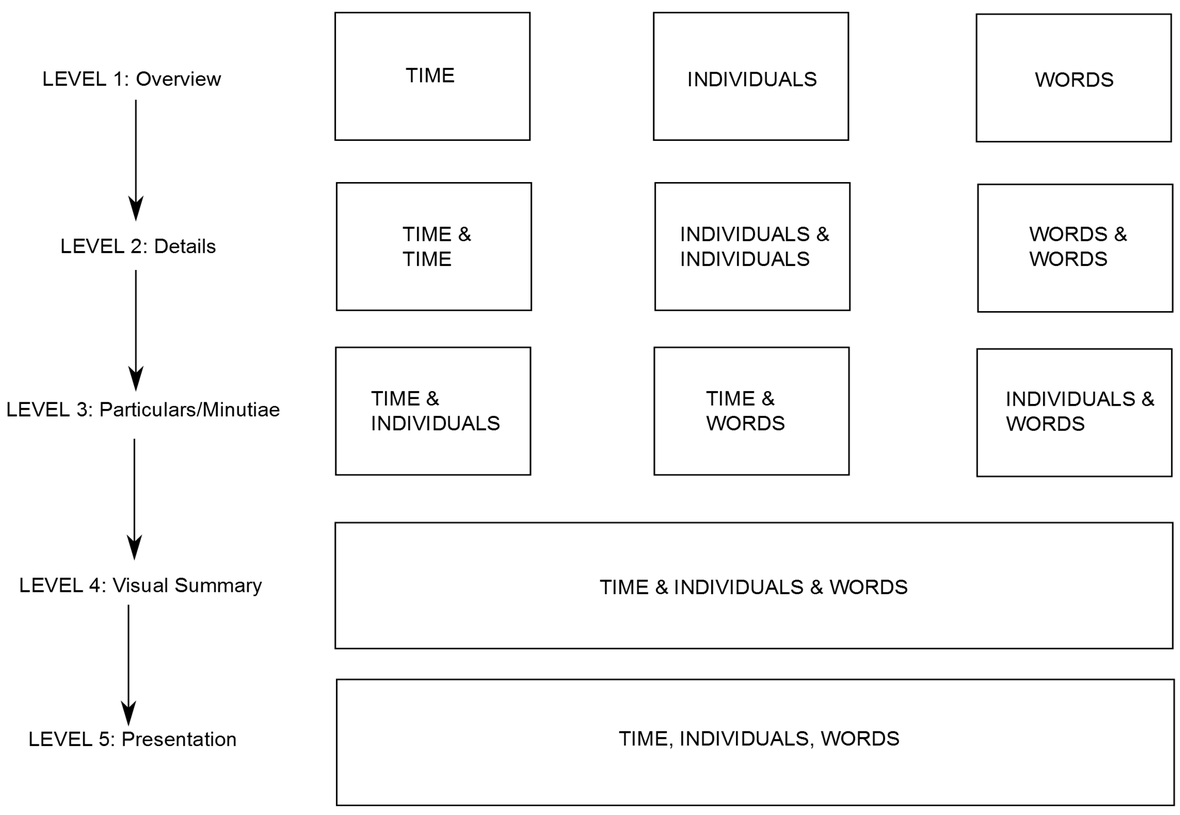
Introduction

Electronic discovery (E-discovery): Investigating emails collected over a period of time, manually, is a strenuous process and the current keyword search is very expensive.

So, there is a great need to determine, visualise and understand whether email subsets are normal or abnormal, pertinent or privileged, relevant (interesting) or immaterial in a quick time.

We proposed a multi-modal and multi-level approach which will generate automated visual representations using a manual search facility.



ONGOING WORK

- The prototype will be turned into a simple, powerful and analyst-friendly visualisation tool that will be tangible and feasible to use in E-discovery investigations.

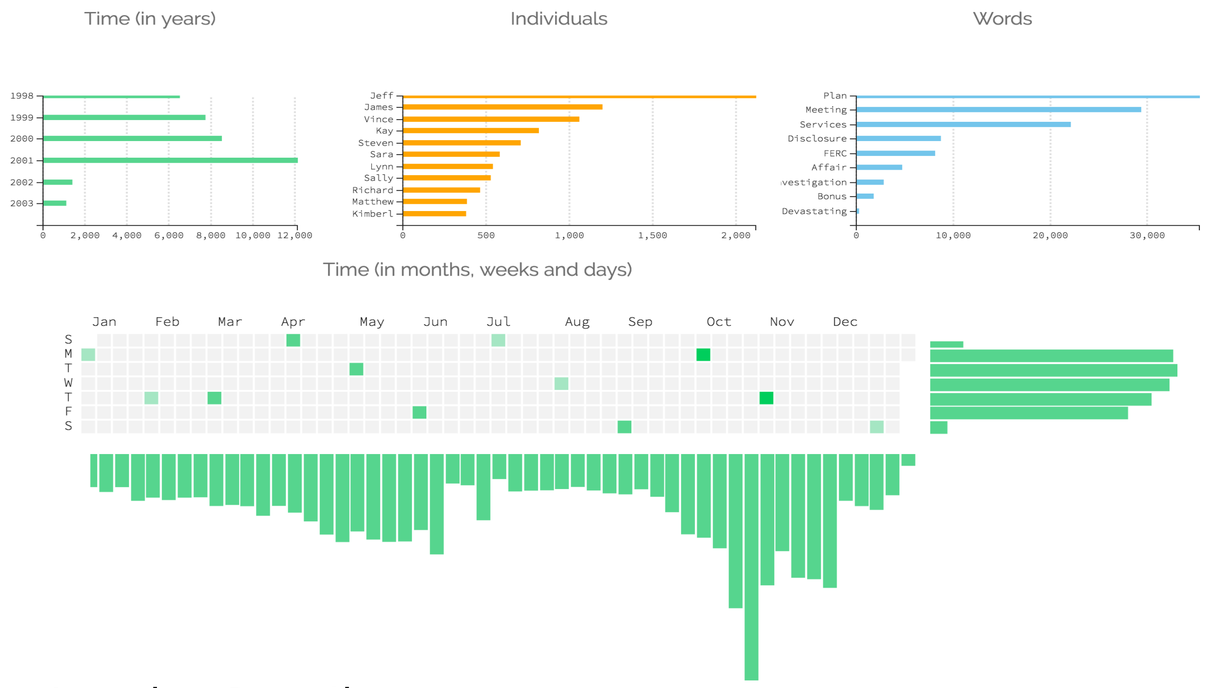
- Text analytics such as automated Named Entity Recognition or Classification of Email categories will be considered in order to provide valuable data preprocessing/analysis.

- Text visualization will be considered in order to provide effective views for the processed data.

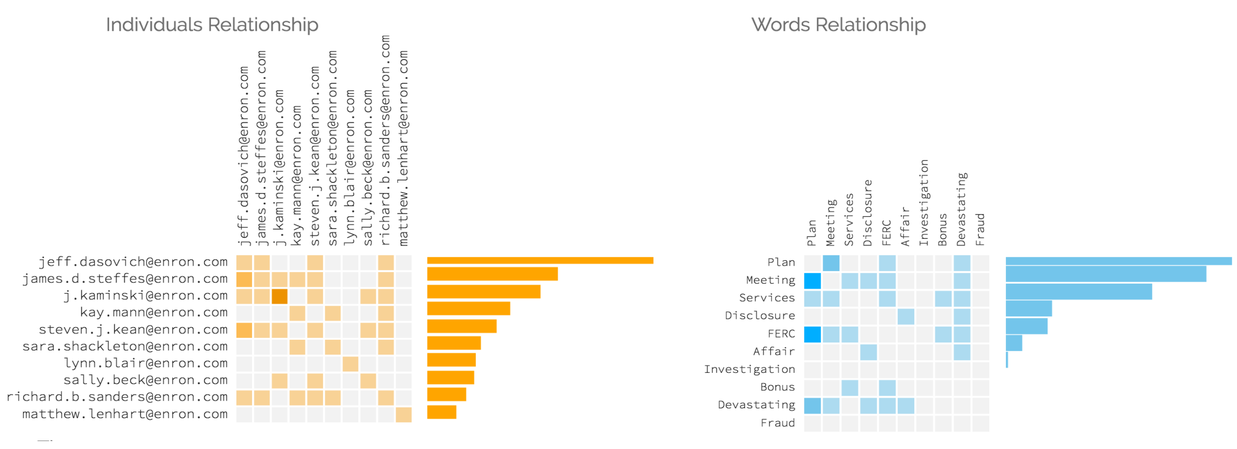
- The complete version of the tool will have user testing using Amazon Turk to evaluate the visualisation choices.

Design Approach

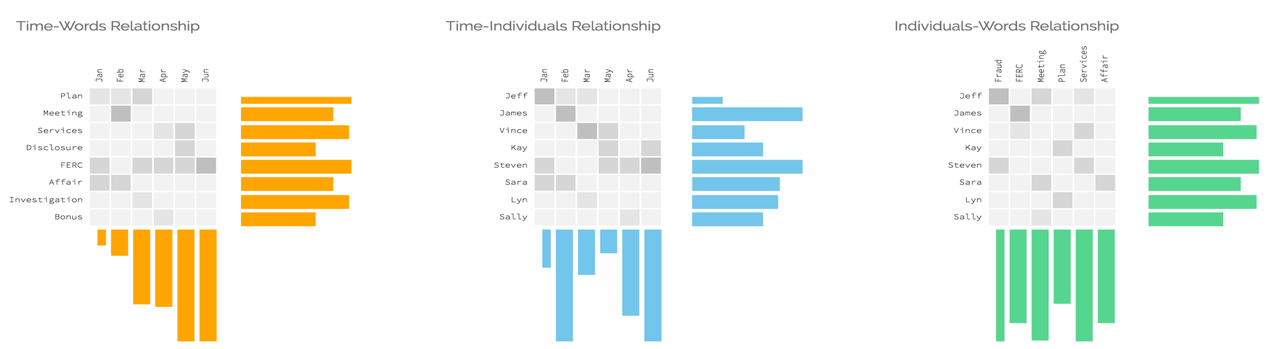
Level 1: Overview
Represents "anomaly" and "relevance" in data
Features:
- Choose time, individuals and keywords independently
- Data selection and filtering



Level 2: Details
Represents "interestigness" in data
Features:
- Choose time-time, individuals-individuals and keywords-keywords combination
- Data selection and filtering
- User interaction



Level 3: Particulars
Represents "Priviledgeness" in data
Features:
- Choose time-individuals, time-keywords and individuals-keywords combination
- Data selection and filtering
- User interaction



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