Textual Requirements into Analysis Models (TRAM)

BACKGROUND
TRAM is a software program that converts user requirements, written in plain English, to analysis models that can be used directly as a basis for software development. It therefore automates the first stage of business operations. Target customers are the business analysts in the requirements engineering sector of the software industry.

The majority of requirements documents are written in natural language (NLR). Translating NLRs into initial conceptual models is a skilled job, requiring a significant development effort of several weeks or months. TRAM automatically generates an initial model in a fraction of the time compared with a manual approach. TRAM can therefore be viewed as an aid to help analysts by enabling software to be developed faster, with less manpower and cost reduction.

THE TECHNOLOGY

The technology has been developed with several industry partners through 13 case studies taken across different domains (aviation, retail, library). These have consistently demonstrated the approach is feasible. A Cloud Solution is now being developed to raise the profile of the technology within the public domain and further validate its utility.

Existing tools that convert requirements into analysis models typically work within a deliberately constrained framework - e.g. using restricted natural language or Use Case templates. TRAM is different, in that it can deal with entirely unstructured, unrestricted natural language. This means that the statements of requirements can be written by anyone – not necessarily a business systems analyst or IT expert.

Patent progressed to PCT November 2014. IP is identified as algorithms / framework and modelling rulebook to automate the analysis stage of software developments to client requirements

KEY BENEFITS

- In tests conducted with industry partners, a 7x speedup from the manual process was observed
- Automatically highlights missing elements in the requirements
- TRAM models have been found to be 80% accurate c.f. models produced by experienced analysts
- Software provides natural language paraphrasing of analysis models, i.e. easy validation for user
- As a tool it provides traceability in the early stages of the system development process, i.e. audit

OPPORTUNITY

Seeking partnering, co-development or investment for the technology.

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