

## **Creating a family of collaborative applications for emergency management in the firefighting sub-domain**

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### **Abstract**

Software Product Lines allow creating a set of applications that share a set of common features. This makes software product lines appropriate for implementing a family of software products when each stakeholder has different needs and requirements evolve constantly. In the case of emergency management, firefighters have begun using their own smartphones to collaborate and access information during emergencies. However, each firefighter role requires different information and the firefighters' requirements are constantly evolving. We propose a well-defined process to help stakeholders in this domain specify the products they require, showing that it is possible to apply this software engineering process to extract collaborative requirements common to a set of applications. To confirm whether it was useful for real software implementation, we defined and implemented two applications for this domain. This paper presents the process used to systematically define the domain model and determine the domain scope, which may be used for other domains. We found the process to be appropriate for identifying features related to the domain and its collaborative aspects. The results are promising; the process allowed us to create two working applications which were positively received by two types of stakeholders..