

Review of **“TESSA: design and implementation of a platform for Situational Sea Awareness”** by Scalas et al. MS No.: nhess-2016-166

The paper describes the design and implementation of a platform for Situational Sea Awareness. Authors provide a detailed description of both the architecture and related services, in a well-structured paper. However, only an applicative scenario related to the ANSWER service, which is just a small part of the whole system, is reported. My recommendation is to revise the manuscript before it is considered for publication. The following changes are suggested.

(1) The authors did not report an analysis of the state of the art. I suggest to add a reference to other systems (if they exist) which provide analogous services or a subset of them, also discussing which are the main advantages of the TESSA platform. Otherwise the novelty of the TESSA platform should be emphasize, if any other similar systems can be found.

(2) I have two comments on the SSA architecture, shown in Figure 1:

- it is not very clear the data flow among client layer, DSS applications, Message Broker and DSS Computation Engine. Some DSS Applications (e.g. VISIR) has both the application and the computational components. If I have well understood, these two components should be interfaced through the Message Broker. However the figure does not show an explicit link between DSS Application and Message Broker, as well as between the Message Broker and the DSS Computational Engine
- it is unclear where the hardware resources are located in the system architecture.

(3) The term SeaCondition is used to refer both to the application client and the DSS application. I suggest to use different names for the two components

(4) In section 3.2, the hardware system used for the map rendering should be described, discussing also the time-to-solution for both the pre-rendering and on-the-fly rendering. Even if authors guarantee on the system scalability, experimental results are not reported.

(5) The affiliation of two authors is missing

(6) It is not clear if the acronym SSA stays for "Sea Situational Awareness" or "Situational Sea Awareness". Somewhere in the paper it seems to stay for "Sea Situational Awareness", in other points for "Situational Sea Awareness".

(7) At page 4 (line 15) the authors use the ambiguous expression "mobile devices or web browsers". Indeed, mobile devices seem to refer to the hardware clients while web browsers to the software clients.

(8) There are some mistakes in the text:

- page 8 line 16 'charts' instead of 'chart'
- page 8 line 18 reference to section 2.1 which is missing
- page 9 line 26 'Service Level Agreements' instead of 'service level agreements'
- page 10 line 20 there is a mistake in the ANSWER acronym: it is not clear what the 'E' stands for
- page 10 line 21 'occurs' instead of 'occur'
- page 10 line 30 'of' instead of 'Of'
- page 11 caption figure 2 'between' instead of 'among'
- in the text, references to figures 2, 3 and 4 are wrong or missing