

Interactive comment on “Analysis of a risk prevention document using dependability techniques: a first step towards an effectiveness model” by Laetitia Ferrer et al.

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This paper aims to evaluate the effectiveness of Dicrim (PACA region, France) by a method based on a dependability approach: External Functional Analysis -EFA. It is a method used in the fields of engineering (industry) and marketing (advertising). In engineering / industry, the method uses models (formulas / equations), algorithms (UML tools) ... to evaluate the failures of the system studied. In this work, the FMEA failures are concretely identified & characterized by a binary (0, 1) criteria (detections elements) approach leading to a global score for each Dicrim. This multi-criteria evaluation is about 6 pages long (p. 26-31) where 4 pages are dedicated to the Table

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n°X ! After an introduction of about 3 pages, the state of the art is the subject of 2 pages (p. 5-6) and the detailed presentation of the method used (and applied on a Dicrim as a system) is the object of at least 19 pages (p. 7-25): hence there is a significant imbalance between the two main parts of the article. The main aspect of the work is indicated by the fifth column of Table VII on the page 20. Indeed, the "detection elements" of the "form" of the Dicrim considered are: the relevance of the association of the text with a background, the font size of the text, the presence of photos, the size of the photos, the typography and the color of the titles ... In brief, it is a question of evaluating the visual attractiveness of the document by the specialists (and not by the end users) and not necessarily its understanding (cognitive integration). This attractiveness (visual) relates to known disciplinary fields: semiology & semiotics, study of eye movements, extraction of knowledge (if research on cognitive integration topic) ... with numerous works not taken into account. Why a font size 12 (standard size) and not another value? What values of visual acuity (observer), salience / contrast (observed) ... for a more readable Dicrim? Which rate between text and image to recommend? Recent studies have shown that only a small area (10% or 20%) of a document can be of interest (up to 80%) to the reader compared to the rest of the document (area of interest analysis). Can we summarize the methodological / theoretical part and focus more on the elaboration and evaluation of criteria (with specialists and / or end-user volunteers)? In other words, what is the added value of the methodology section with regard to the application? The methodology part is a big work whose final result (multi-criteria rating) is disappointing. For example, this section could have more relevant results like UML model given the many logigrams and tables developed. Finally on the general form, reading the paper is very difficult because of the interdependencies between the different logigrams and tables. The font size of the text is not equal to 12 (standard size)! The developments of the page 15 ... cannot be justified by only one reference (CEPRI)! Figure 1 is unreadable. This type of figure (logigram) is easy to understand by an "expert" of the French system.

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Please also note the supplement to this comment:
<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-311/nhess-2017-311-SC2-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-311>, 2017.