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INFORMATION DISSEMINATION IN SUPPORT OF DISASTERS. FOLLOW UP OF THE CRAZY IDEA

Abstract

In a previous paper [IAC-13,E5.5,4x18863, Disaster management: a crazy idea to disseminate emergency information to populations], the concept of using geostationary satellites broadcasting on the FM radio band was introduced as a means to disseminate immediate information to a large population and wide area in a very short time, making the concept suitable for immediate warning and post disaster information system. Starting from the acknowledgement that the FM radio is the most disseminated and ubiquitous equipment in the world, it is shown that its simplicity, availability and long autonomy makes it perfectly suited to a warning system, especially in the cases where the infrastructure networks are not any more available. The paper not only further demonstrated technical feasibility of the concept at the satellite level but also showed that the whole system is intrinsically redundant, available and reliable.

In full line and compliance with the UNISDR, Hyogo Frame for Action, this new paper expands the concept and details the constituting elements. The satellite system, the broadcasting and control centers, the sharing procedures, the type of messages, the message broadcast centre are described at functional level. A more detailed analysis of the resilience, availability and robustness is performed. The paper also considers the existing NOAA Weather Radio and the Canada Weather Radio and details how the Specific Area Message Encoding (SAME) message standard can be leveraged at a global level by using satellite broadcasting. Specific warnings and specific areas, specific addressees are amongst the advantages of the approach. Finally, regulatory aspects and implementation roadmap are addressed under the form of a proposal. Economical aspects are considered in terms of capital and operational expenditures. Comparisons are performed. The paper concludes with the potential benefit and simplicity of the setup of such a system at Earth's level.