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A Framework for Social Media and Text-Based Content Analysis for Event Management Purposes

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Abstract: Many emergency response organizations use public forums and social media to collect useful information that might help in crises and other crucial events. Many disadvantages related to accuracy and control arise from using those kinds of sources as the ER organizations do not have full control over the posted information or the vocabulary used. This paper introduces a new system called Trusted Event Management Network (TEMN) that aims to solve the problems associated with the collected and extracted information from the social webs. The components of TEMN interact with each other in such a way that the collected information is classified properly and automatically delivered to the appropriate ER organization. A new concept related to the reliability of the collected information, called "Level of Trust" is introduced in the system which is a judgment tool used in the introduced system to judge how trusted the received information is. This concept has been developed in a way that makes it possible to be used in different kinds of applications, such as crises management, social web, etc. The proposed system maintains the LoT values updated. A GPS locator to provide the emergency response organization with the location of the crises is a major component of the proposed system, along with a GPS tracker to overcome the problem of traffic and traffic lights. TEMN as a proposed system has proved to be able to process all received messages, filter the received flow and relate it to the concerned ER agencies. Overall, the achieved results of the system are promising.