

## Visualization of Tsunami Hazard in a Digital Earth Environment

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Tsunami hazards are something we seldom think about, until disaster strikes a few generations after the last event. It is important to think in terms of probabilities per century and we present our work on visualizing probabilistic tsunami hazard prediction in a digital earth environment. Tsunamis are caused by underwater earthquakes and can originate thousands of miles away from the coastline. The massive Sumatra-Andaman earthquake and subsequent tsunamis hitting the waters northwest of Sumatra on December 26th, 2004 have awakened geoscientists of the importance of tsunamigenic earthquakes and the economic consequences. Among the efforts devoted to understand tsunami phenomena, we investigate the probabilistic prediction of tsunami hazard and present our visualization efforts on illustrating the computational results of probabilistic tsunami hazard prediction on a digital earth. With the digital earth environment, the user can interactively examine the computed possible tsunami hazard with the context of geographical information provide by digital earth system. By integrating our system with the Google Earth, we could also be able to broadcast the visualization result through the Internet and provide valuable information in real time, which can save many lives.