FABRIC STRUCTURES FOR MASS SHELTER IN DISASTER AREAS

Research and Development Proposal by the
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ABSTRACT

Expedient provision of emergency shelter becomes essential when large numbers of people are left homeless due to sudden disasters such as earthquakes, fires, floods, typhoons, forced migration etc. which occur frequently around the globe.

While the human and economic misery within the affected communities can strain their emotional and physical endurance, delays in immediate assistance can spread and deepen the hardship and cause wider social and political unrest or extended economic instability.

There is an appropriate emerging technology, namely modern fabric membrane construction, which seems feasible to use for large scale shelter. Such structures could be deployed immediately and for extended periods to protect life and property and to house essential individual, social, industrial and commercial activities. While the use of fabric membrane structure is as ancient as civilization, its most effective modern application has been relatively limited.

The objective of the proposed work is to advance the state of the art of providing shelter for large populations struck by disasters in any part of the world. The shelter will be safe, stable, light weight, easily packaged, stored, transported, erected and re-used. It will be readily available and affordable to large communities, relief agencies and usable within 48 hours in the affected areas. To achieve the stated objectives the R & D team will mobilize the best available expertise in planning, manufacturing, design, organization and management. The development, design, testing and full documentation is expected to require 2 to 3 years of interdisciplinary team effort and costing 1.5 million U.S. Dollars.