

Distributed and Decentralized Location-Aware Architecture

Researchers at the University of South Florida have developed a technology that has the ability to interpret and collaborate transmitted location data from GPS transmitters from multiple distributed and decentralized servers into one output GPS map screen.

The scaling of a centralized server system has been the recent focus of many researchers. The approach has presented numerous problems. By scaling up a centralized server, more infrastructure and more server computer's are required. Additionally, if the server were to be compromised in any fashion then the entire system would be destroyed. Hence, there is a need for a system that can have less server clogging, crashes and also have multiple servers onto a single system.

Researchers at USF have created a different approach to addressing the enlargement of server systems. The invention adopts the use of multiple decentralized server systems to track GPS transmissions from multiple transmitters instead of using a high capacity centralized system. The software program transmits data in real-time between the transmitters and multiple decentralized servers and then interprets location transmissions onto a map and makes the location information available from any of the server locations. Titled "Geotella," the software shares the GPS location information of the transmitters and the other servers. The system has the ability to remain relatively unchanged if one individual server becomes physically compromised.

ADVANTAGES:

- Less server clogging
- Fewer server crashes
- Combine GPS data transmissions from multiple servers onto a single system

Connects Distributed & Decentralized Servers



A Screen-Shot of a Web Interface Showing the Overlay Network of LBS Servers

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