



Intelligent Edge: Analyze, learn, predict as data is created, at the edge, on existing hardware using a powerful edge compute/data fabric

Cubic | Trafficware and SWIM.AI, a Silicon Valley edge intelligence software firm, launched TidalWave™, a live streaming traffic information service powered by machine-learning and edge computing. This shift to edge computing transforms the accuracy and resolution of traffic information so communities can deliver streaming traffic data with sub-second accuracy, while also packaged in a more affordable cloud service with low overhead and no impact to city infrastructure.

TidalWave was designed using an architecture that delivers predictive learning applications for the connected vehicle, smart cities, smart intersections and “Internet of Things” (IoT) markets. Analysts are recognizing that the power of edge computing can lead the ITS market into the next transformative era of technology, primarily because it is the fastest, most scalable, substantially more economical, and most reliable traffic data streaming service to come to market.

Immediacy of Live Traffic Data

TidalWave provides superior delivery of high resolution and accurate live data for city intersections with results that are less than a second later than actual intersection changes. This immediacy enables optimal vehicle routing using predicted intersection behavior and traffic load, covering the next 2 minutes at all times. And, the system can deliver live streaming traffic data to end-user applications in under a second.

The SWIM technology stack that underpins the TidalWave service delivers unprecedented performance for traffic data processing and delivery of precise information to 3rd party applications.

To achieve high performance and low latency, the technology transforms and compresses the data stream, reducing the raw data volume by a factor of over 1,000. Performing analysis at the hub (whether at the central ATMS or on controllers at street level) enables the system to achieve infrastructure cost savings. Perhaps as importantly, costs are borne by the service subscribers and not by the city.

