Design For Analysis

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Manufacturers are designing systems today that “phone home”

Consider embedded systems already built into

- Vehicles – cars (service information, monitoring driving habits, autonomous driving), autonomous mass transit, farm vehicles whose drivers are only on board for safety reasons, not to mention aircraft and ships
- Electronic devices, including, but not limited to mobile devices, computing devices, televisions …
- Appliances – soon your refrigerator will tell the manufacturer when your water filter needs replacement

A number of automotive & other manufacturers are investigating product design methods to

- Make it easier to collect and analyze usage data for service support, product evolution
- But, also to tie it back to the purchaser so that they can better understand buying patterns, develop requirements for new products, evaluate behavior from a marketing perspective
requirements

- Back-end systems, distributed world-wide, that can collect, manage, analyze, prune, and evolve content knowledge bases produced by these devices

- Built-in, on-board, sensor and higher level processing capabilities

- Metadata architectures & management facilities so that the collected content can be understood & used for diverse business purposes

- Built-in semantics to assist, including on-board reasoning to aggregate and abstract low level data, identify anomalous behaviors

- Standards, analysis tools, systems architectures, large scale processing capabilities, distributed analysis (given differing requirements for anonymization on a country by country basis) are all needed