SMART MOBILITY SYSTEMS

Urban mobility systems traditionally combine high-speed, high-volume, point-to-point transportation – like automobiles – with more flexible but slower and lower-volume modalities – like walking, cycling, taking a taxi, and driving.

Ubiquitous access to information through mobile wireless devices changes the tradeoff. It allows high-volume transportation to become more flexible and responsive while personal transportation becomes more efficient. Consequently, the traditional distinction blurs.

Transportation systems can become more responsive to changing demands, and users can make better transportation decisions.

The Smart Mobility project demonstrates the application of these concepts to the Paris bus system.

LANDMARK ELECTRONIC BUS STOPS

Smart Mobility bus stops function as powerful urban landmarks, particularly in neighborhoods that lack a distinctive identity and focus.

They can take advantage of twenty-first century digital display technology, in the same way that Guimard took advantage of the industrial technology of his time in his designs for Metro stations.

Electronic, networked bus stops can serve as entry and orientation points for neighborhoods, supporting neighborhood concierges who provide guidance and advice.

The transportation system can broaden its role from that of a provider of physical mobility to that of a comprehensive source of efficient access to the varied and far-flung resources and attractions of the city.

SELF-ORGANIZING BUS SYSTEM

With network and computational support, bus routes can become self-organizing systems in space and time, rather than structures with fixed routes and timetables.

Traditionally, urban train and bus systems have operated with fixed routes and timetables, while private automobiles and taxis have offered transportation whenever and wherever it was needed – but at much higher cost.

In the self-organizing bus system, bus operators can keep precise track of vehicle movements, electronically monitor demand from minute to minute, and responsively allocate service capacity to where it is currently needed most.

In addition, by means of mobile electronic devices, potential passengers can be informed of when and where service will be available to meet their needs.

RECONFIGURED BUSES

The traditional bus is basically a long, narrow box on wheels. It is not particularly agile at navigating through crowded city streets; it does not allow passengers to make pleasant and productive use of their time; and it does not provide efficient ingress and egress.
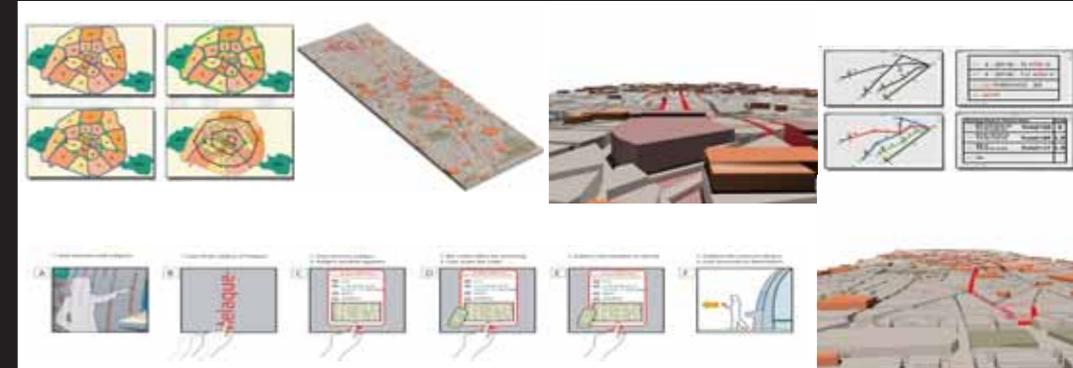
By embedding more electronic intelligence, buses can become flexible rather than rigid, so that they wiggle themselves through the streets in a more agile fashion.

Buses can become mobile network nodes, so that passengers are connected for guidance, entertainment and mobile work. Both interior and exterior surfaces can carry information displays.
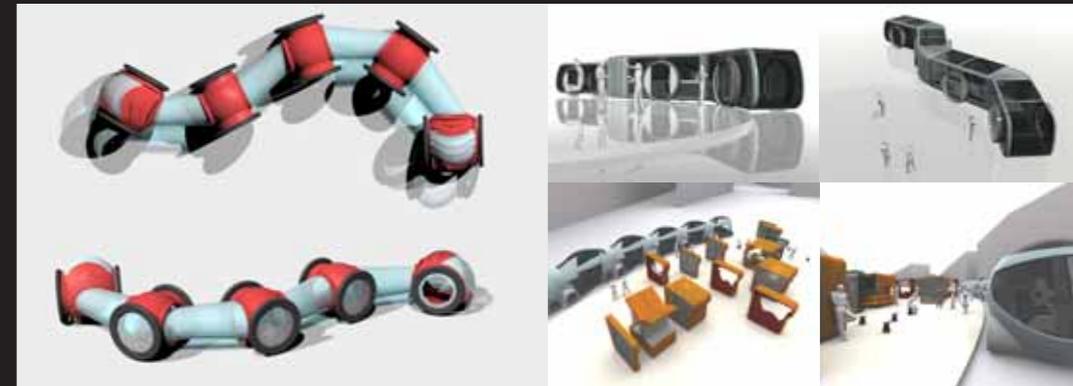
ELECTRONIC GUIMARD & NEIGHBORHOOD CONCIERGE

SELF-ORGANIZING BUS SYSTEM

RECONFIGURING THE BUS