



Bus C Customer Information S Systems

Bus CIS – Goals

- Provide passengers with accurate real-time information about the bus services they are waiting for or are planning to use
- Lower capital and operating costs and benefit from shared equipment and infrastructure
- Deliver system based on Open Standards, Open Data, and Open Source
- Leverage experience of One Bus Away development



Philosophy Underlying Project Delivery

Open Standards

- Between hardware components
- Between Bus and CIS Server
- Between CIS and other MTA/NYCT Systems

Open Data

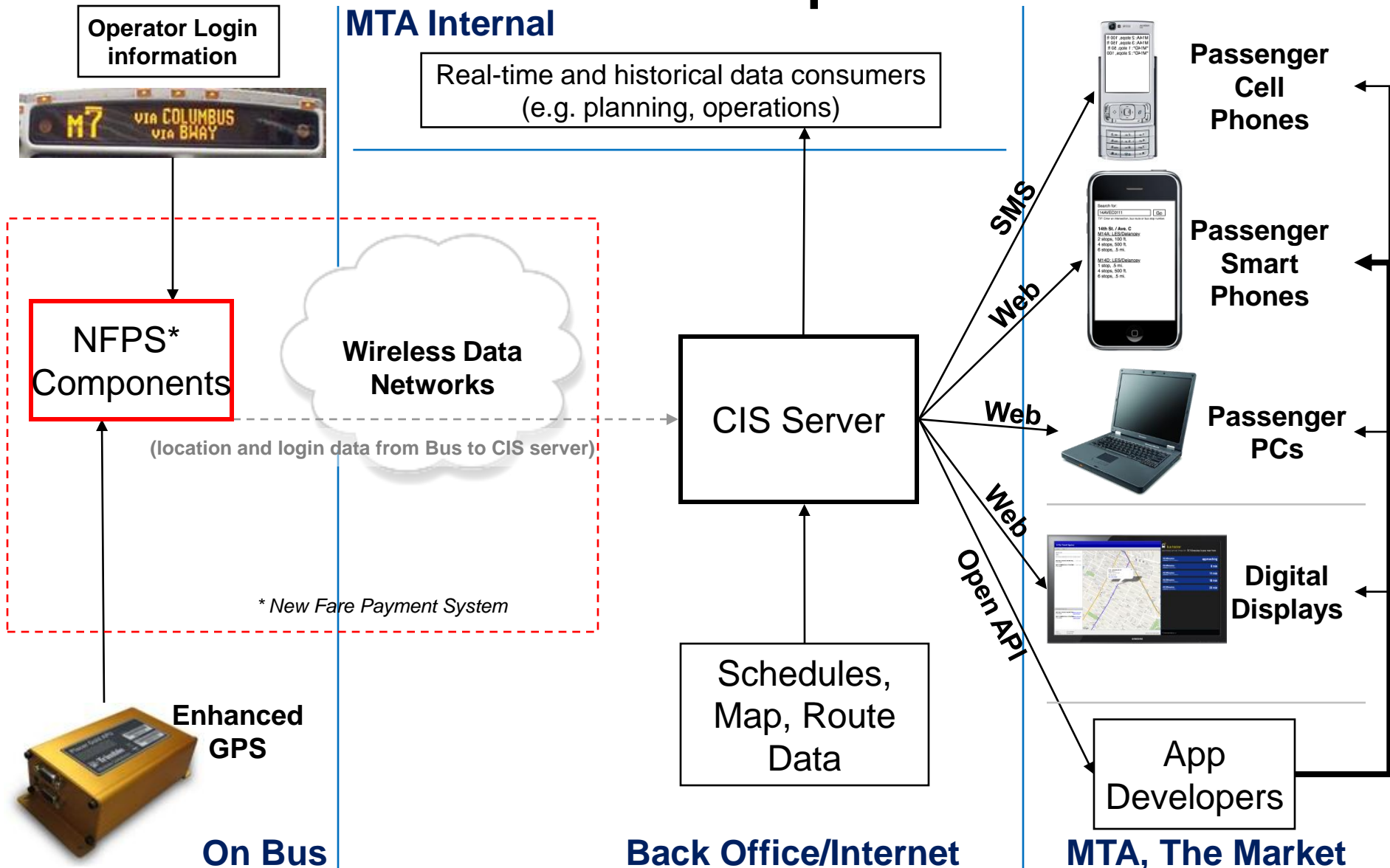
- Between the MTA, software developers, and customers

Open Source

- Software code and APIs, where applicable



Concept





- Received very favorably by bus riders, public, and developer community
- MTA worked as “systems integrator”
- Hardware: Extension of VeriFone solution to MTA/NJT/PATH/MasterCard NFPS Pilot. Will support future open/contactless payment system
- Software: Open Sourced OneBusAway, development by OpenPlans and Cambridge Systematics

Reaping the benefits

Traditional Single Vendor Solution	Our Method
Acquired knowledge largely resides in contractor.	Knowledge is built within the MTA.
Proprietary hardware.	Open standards and off-the-shelf components allow easy replacement.
	Allows concurrent use of hardware from multiple suppliers
Proprietary server	Open Source OneBusAway: anyone can download and use
Limited or proprietary interfaces.	Exposed data.
\$10k - \$25k per Bus (HW + on-bus SW)	\$3500 per bus



The power of Open Standards and Open Data

- Our philosophy is to deliver an extensible, open system.
 - Nearly 200 developers have signed up for API access, with only one route available.
 - MTA's Bus Operations and Operations Planning have begun to integrate Bus Time data in their work.
 - The future is wide open.

