

Leveraging open data to reach mobile customers in real time



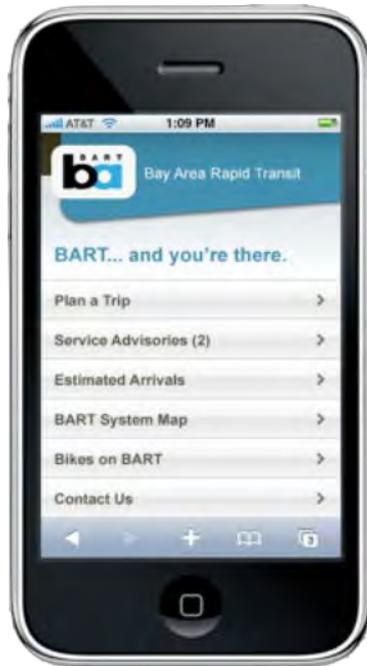
DOT T3 Webinar , April 10, 2012
Timothy Moore, Interactive Services Manager
Bay Area Rapid Transit District (BART)

BART moves about

380,000

customers a day

WE'VE PICKED OUR SPOTS



Web (bart.gov)

Mobile web app (m.bart.gov)

Email and Text subscriptions (bart.gov/alerts)

Text on-demand (bart.gov/sms)

Blog (bart.gov/blog)

Interactive Voice Response (510-465-2278)

RSS feeds (bart.gov/rss)

Twitter ([@sfbart](https://twitter.com/sfbart))

Facebook ([/bartsf](https://facebook.com/bartsf))

YouTube ([/bartable](https://youtube.com/bartable))

Foursquare ([/sfbart](https://foursquare.com/sfbart))

Pinterest ([/sfbart](https://pinterest.com/sfbart))

Google + ([/sfbart](https://google.com/sfbart))

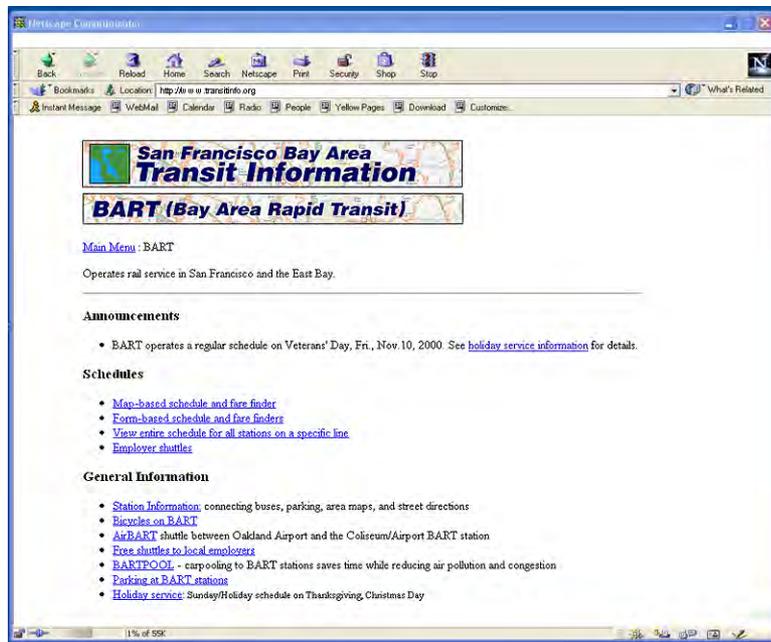
OPEN DATA FILLS THE GAPS



- 50+ apps on all viable platforms
- 2000 developer subscriptions (*optional*)
- 300 registered API keys (*not required*)
- 170,000 calls/day (*local caching encouraged*)

bart.gov/apps

HOW DID IT START?



1998

www.transitinfo.org

- Two Cal undergrads
- A unique value proposition
- No license for BART data

PROVIDING TOOLS

Embarcadero Departures 10:13 AM	
Train	Estimated Departure
Daly City	1 min, 10 min, 16 min
Dublin/Pleasanton	12 min, 27 min, 42 min
Fremont	7 min, 19 min, 34 min
Millbrae	5 min, 20 min, 35 min
Pittsburg/Bay Point	3 min, 15 min, 29 min
Richmond	8 min, 23 min, 37 min
SF Airport	13 min, 28 min, 45 min

2006 - 2007

Do-it-yourself displays

Embedded trip planners

News and advisory widgets



bart.gov/display

bart.gov/embedded

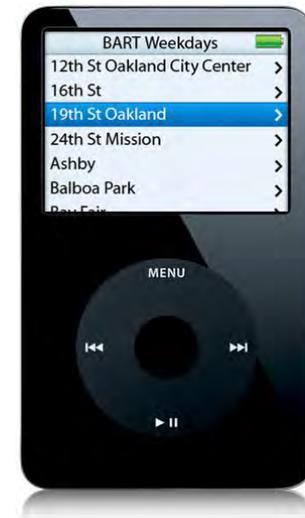
BUILDING APPS

2001-2009

Native apps on three
mobile platforms
plus mobile web

90,000 registered users;
award-winning

A lot to keep up...



THE SHIFT TO DATA



craftsquatch / Etsy

2007

- RSS advisories
- GTFS schedules
- BART was in Apple App StoreSM on opening day

bart.gov/gtfs

bart.gov/rss

REAL TIME FEED

2008

Simple XML

Updated every 60 sec.

bart.gov/ETAfeed

```
17 <destination>Fremont</destination>
18 <estimate>1 min, 15 min</estimate>
19 </eta>
20 - <eta>
21 <destination>Millbrae</destination>
22 <estimate>6 min, 21 min, 36 min</estimate>
23 </eta>
24 - <eta>
25 <destination>Pittsburg/Bay Point</destination>
26 <estimate>7 min, 22 min, 37 min</estimate>
27 </eta>
28 - <eta>
29 <destination>Richmond</destination>
30 <estimate>7 min, 14 min, 22 min</estimate>
31 </eta>
32 - <eta>
33 <destination>SF Airport</destination>
34 <estimate>16 min, 28 min, 43 min</estimate>
35 </eta>
36 </station>
```

“THE REAL BART API”

2010

Incremental cost:
we use it, too

No strings attached vs.
strings with benefits

bart.gov/api



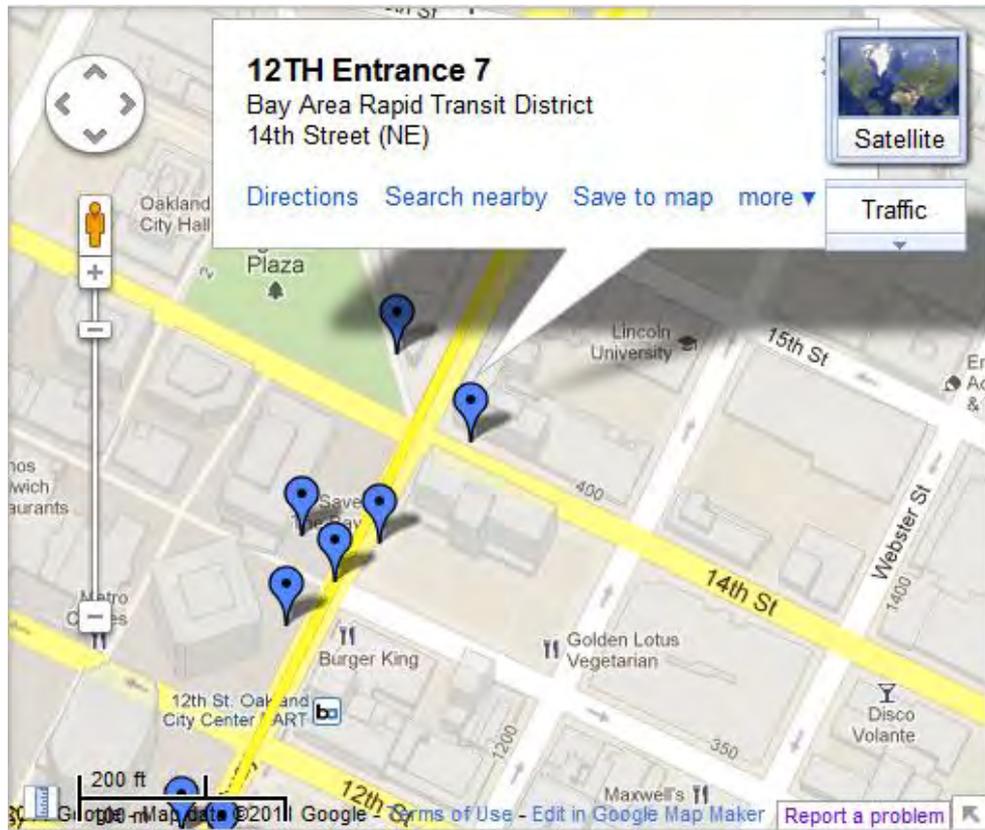
GEOSPATIAL DATA

2011

KML and KMZ

Right-of-way,
stations, entrances

bart.gov/geo



GTFS - REAL TIME

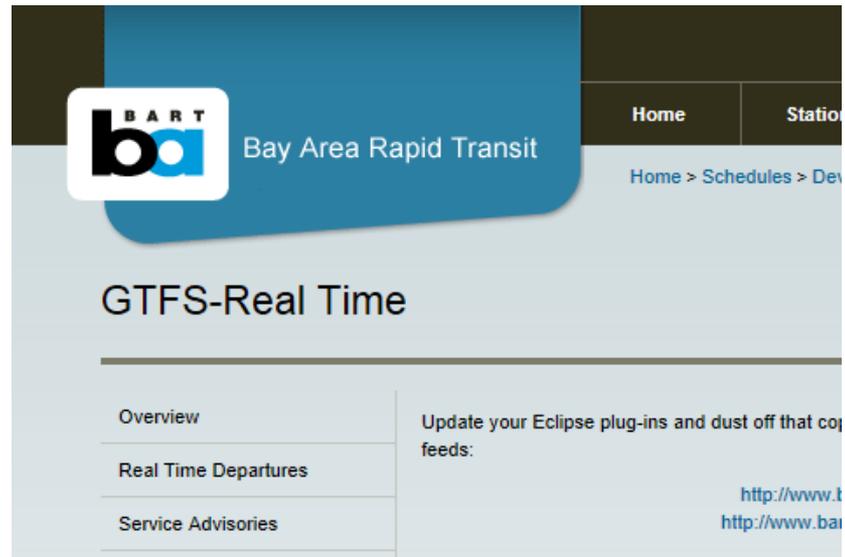
2011

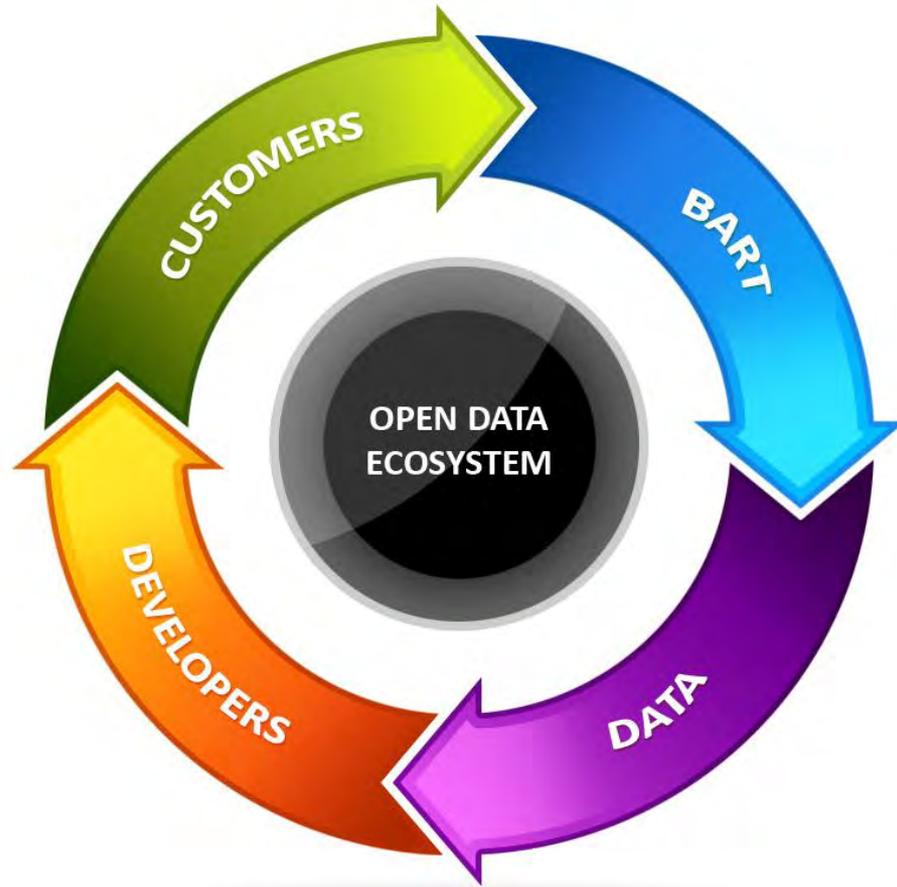
Built to work with GTFS

Delay and advisory data

Protocol buffers

bart.gov/gtfsrt





How do we support the ecosystem?

A SIMPLE LICENSE



Short + sweet: 258 words

*We reserve the trademark
Data provided “as is” and “as available”
You don’t have to sign anything*

bart.gov/dla

MULTIPLE PATHS



Casual:

Embedded trip planner, DIY display, App Map



Intermediate:

RSS feeds, simple ETD feed, GTFS feed



Advanced:

The Real BART API, Geospatial Data, GTFS-RT feed

bart.gov/developers

OPEN & STRUCTURED DATA

- Available for all to read and implement
- No fee (but maybe an SLA down the road?)
- Re-usable both commercially and non-commercially
- If it's not a "standard" (e.g. GTFS) we provide the spec
- No playing favorites for a fair, competitive marketplace



PROMOTION

Apps to go No matter what your platform, the 3rd party apps using BART's open data have you covered. | bart.gov/apps

Station	Arrival	Departure
Dublin/Pleasanton	12:25	
Pittsburg/Bay Point	12:27	42
Millbrae	14:29	43

Station Information
298 Market Street
San Francisco, CA 94105
Bike Station
No Parking
Add To Favorite Stations

bart.gov/apps

BART... and you're there.

Build your own BART apps FREE DEVELOPER TOOLS AT bart.gov/developers

bart.gov/developers

BART... and you're there.

Data and apps

POSITION

Front and center,
out of the silo

The image is a screenshot of the BART (Bay Area Rapid Transit) website. The top navigation bar includes links for Home, Stations, Schedules, Tickets, and Rider Guide. A dropdown menu is open under 'Schedules', listing Overview, Real Time Departures, Service Advisories, Mobile, and Developer Resources. The 'Developer Resources' link is circled in red. The main content area features a 'QuickPlanner' form with fields for Station, Address, Date, and Time, and a 'Get Schedule' button. Below the form are sections for 'Service Advisories' (52 trains: no delays reported) and 'Real Time Departures' (9:10 am) for North Berkeley. A large banner image of a woman is on the right, with the text 'BART... and you're there.' and 'Whether you're headed to work or meeting friends, catching a flight or catching a game, BART brings the Bay Area together.' Below the banner is a 'Go Mobile' section with text about web, apps, SMS, and email alerts.

Contact Us / View BART Map

Home Stations Schedules Tickets Rider Guide

BART Bay Area Rapid Transit

QuickPlanner [BART Map](#)

Station Address
Bay Fair (San Leandro)

Station Address
San Francisco Int'l Airport

Departing around Arriving around

03/18/2011 9:30 AM

Get Schedule

Service Advisories

52 trains: no delays reported.

Real Time Departures 9:10 am

North Berkeley Go

FRMT 6 min, 21 min, 36 min
MLBR Arrived, 14 min, 29 min

BART... and you're there.

Whether you're headed to work or meeting friends, catching a flight or catching a game, BART brings the Bay Area together.

Go Mobile: web, apps, SMS and email alerts

BART is on more mobile platforms than you can shake a stick at: get real time departures, advisories, trip planners, fares, schedules and more

RESEARCH

posterous

SFBART's blog

Not quite as official as www.bart.gov

[« Back to posts](#)

The mobile survey results are in!



A survey of BART riders who use mobile devices has found strong demand for new and existing applications and for expansion of wifi and cellphone coverage on BART.

Connect:

customer needs and
developer skills

Mobile platforms, use cases,
problem statements

COMMUNITY

Starting discussion, generating ideas



Timothy Moore BART Developer meetup!



Zeitgeist

Timothy just checked-in @ Zeitgeist (w/ 8 others)

August 4 at 5:54pm via Foursquare · Comment · Like

twitter

Sign In



Timothy Moore
@timomio

I wish someone would use iOS5 geofencing to show @SFBART ETDs, delays as I approach the station. cc: @DavidHodge

18 minutes ago via Twitter for iPhone



Replies to timomio

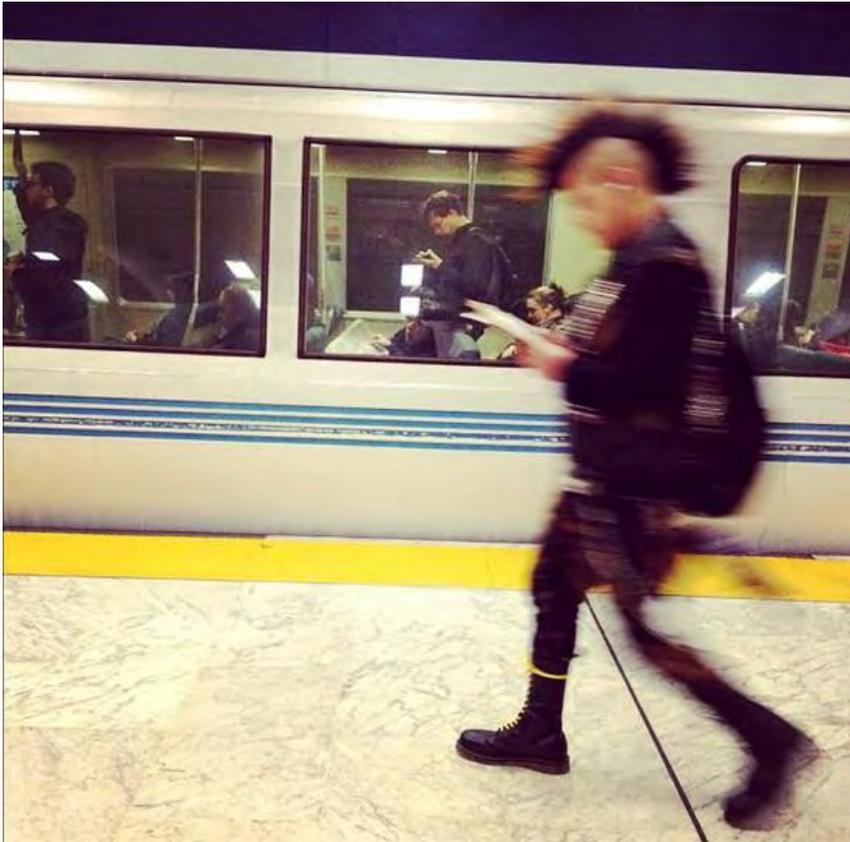


DavidHodge
@timomio hmmm....

18 minutes

Meet ups · One-on-ones · Google groups ·
RSS feeds · Email lists · Developer challenges ·
Hack days · Media events · Transit camps ·
find a politician willing to get in front of a camera!

TAKEAWAYS



sheenberg via statigram

- The internal mind shift
- Cranking out data isn't enough
- Not an excuse to walk away
- Use it to drive your own messaging
- Get to those edge use cases
- Give your customers credit
- Real incentive to stay ahead!

Thank you!

@timomio



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