

# MBTA-realtime

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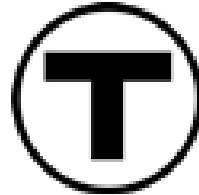


# MBTA-realtime

**MBTA:** client

**IBI Group:** strategy, design, development, and deployment

**MBTA-realtime** is a system to manage all of  
MBTA's **real-time passenger information**



**Size:** 5<sup>th</sup> Largest Agency in the US, 1.3 million Passengers Daily

**Multimodal:** Subway, Light Rail, Bus, Boat, Commuter Rail

**Goal:** Provision of Real-time Passenger Information



Customers  
Expect

Accurate and up-to-date real-time information

At all stages of their journey

Through a variety of media



Vehicle  
Locations

**Where** is the bus?



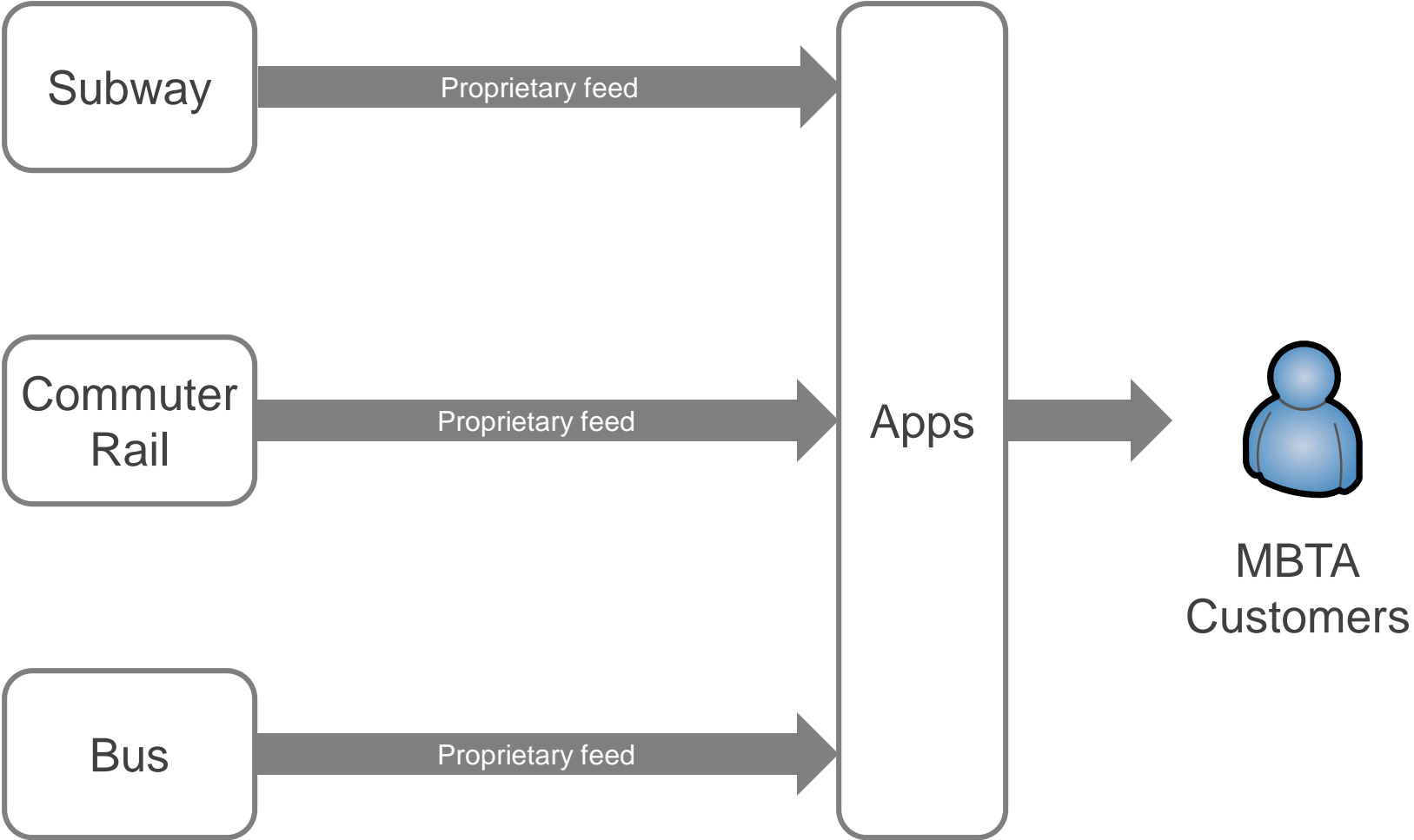
Arrival  
Predictions

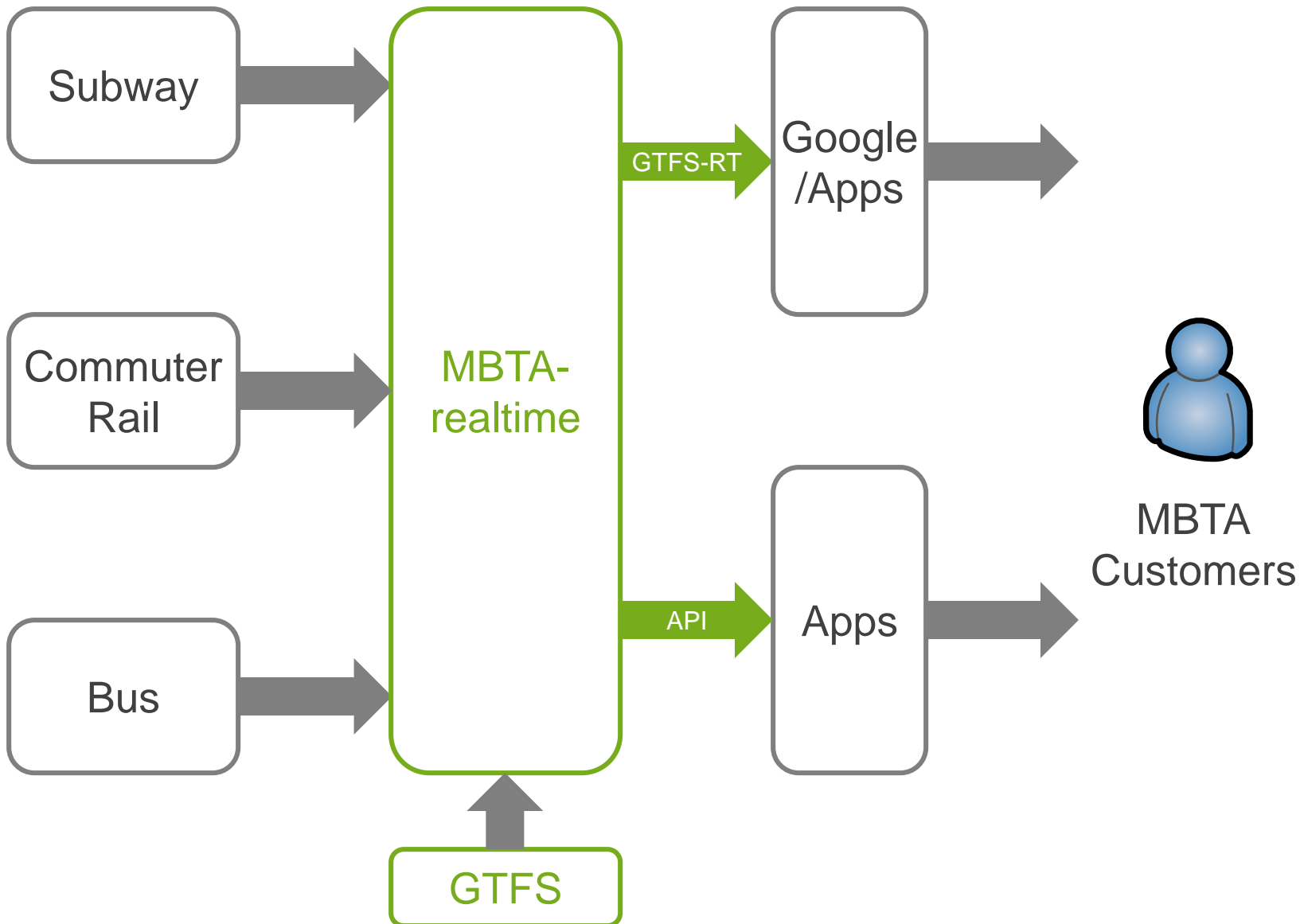
**When** is it going to get here?



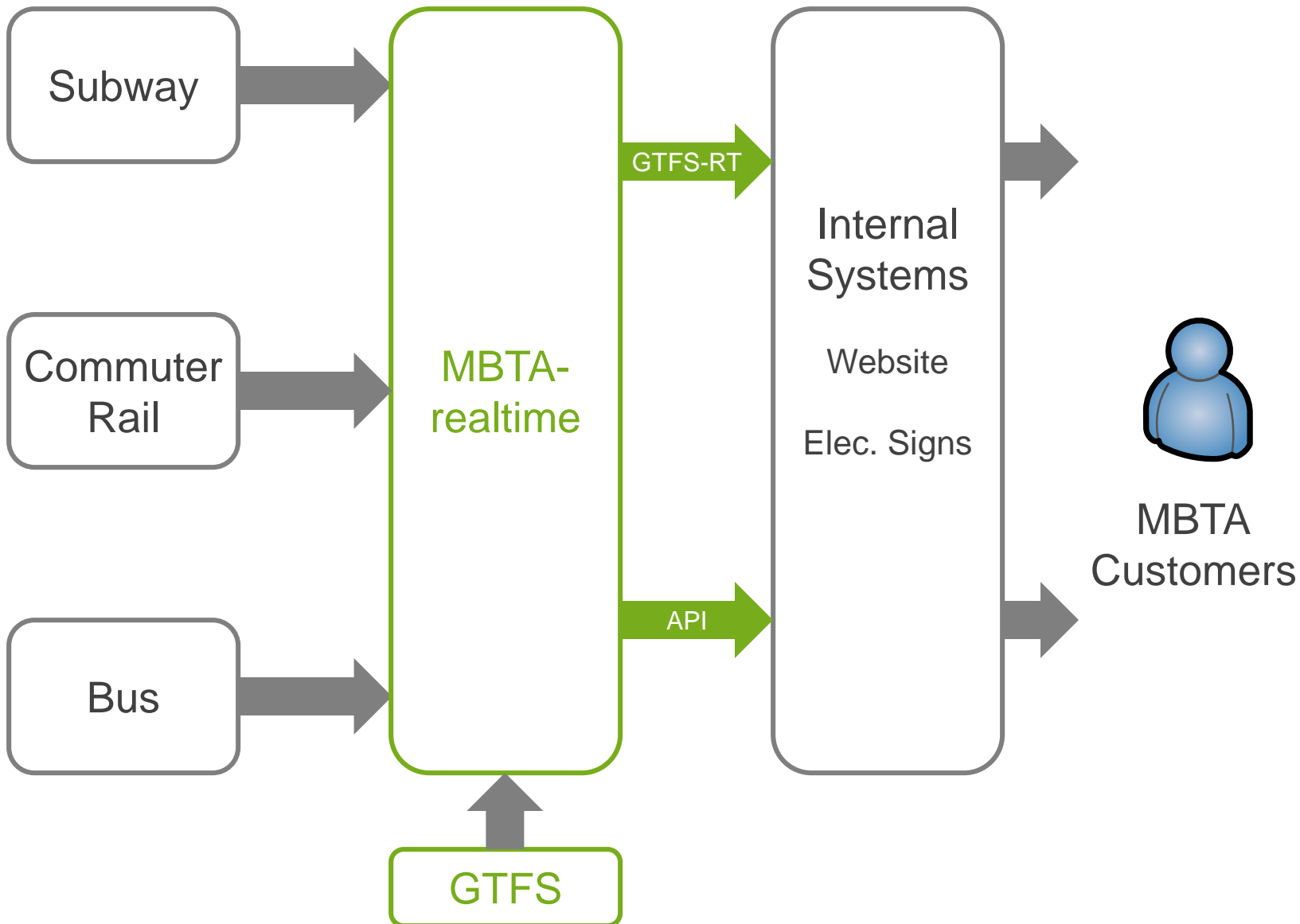
Service  
Alerts

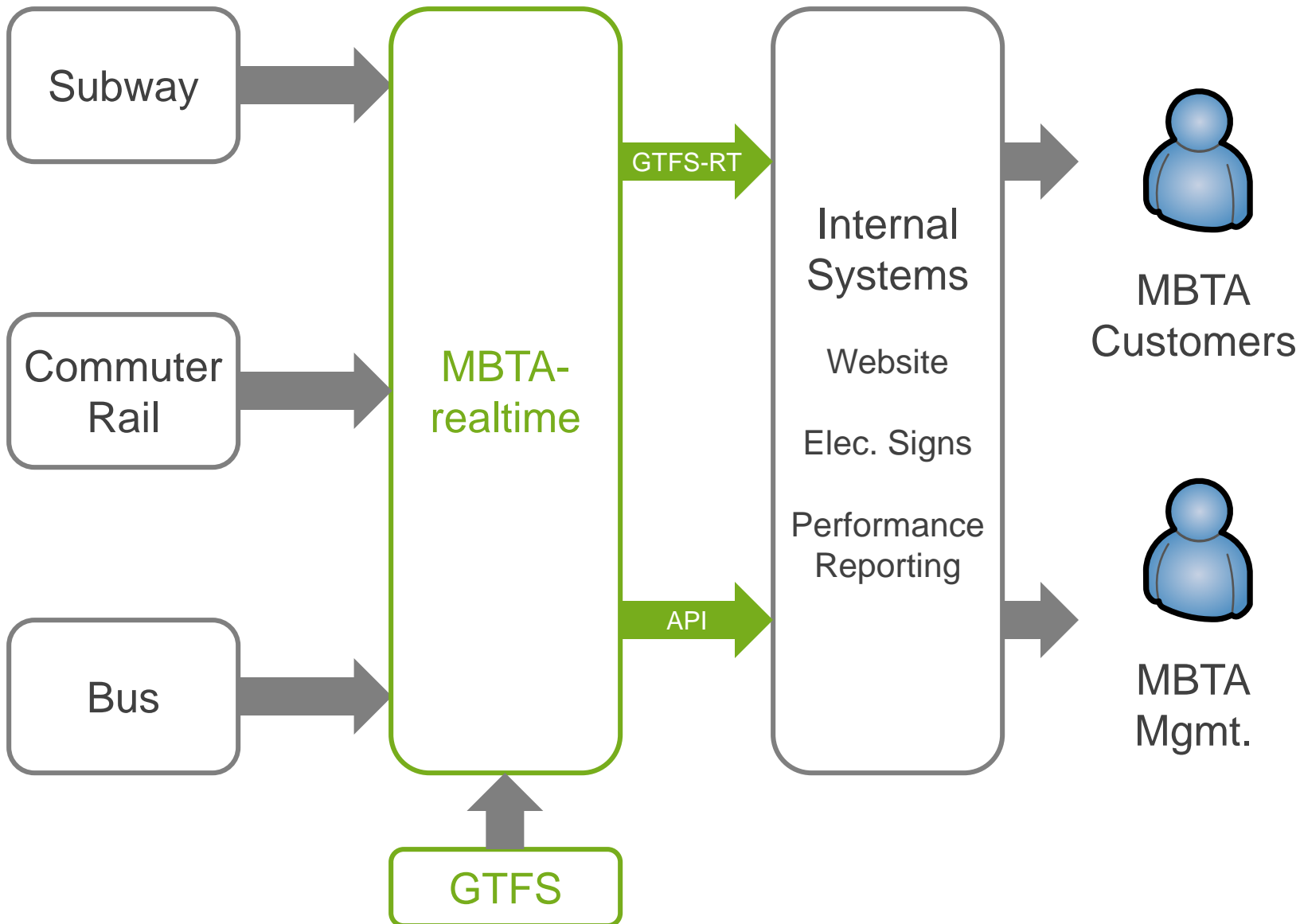
**Why** is it delayed?











**MBTA-realtime** aggregates real-time locations and predictions and disseminates them in uniform formats



Vehicle  
Locations

**Where** is the bus?



Arrival  
Predictions

**When** is it going to get here?



Service  
Alerts

**Why** is it delayed?



Service  
Alerts

**Is there something I should know?**



Route 1 experiencing minor delays due to traffic

Routes 101 and 106 diverted on Nov 11 starting at 9:00 AM due to Parade at Malden Square

Red Line experiencing moderate northbound delays between South Station and Park Street due to medical emergency

Lowell Line Train 1310 (5:00 pm from Lowell) cancelled today due to mechanical failure

South Station closed until Sun Dec 1 every Saturday and Sunday due to construction



Give a reason

Describe how customers are or will be affected

Are human-readable

Are created (or at least vetted) by a person

Are read by customers exactly as you create them

Are broadly disseminated

Are targeted



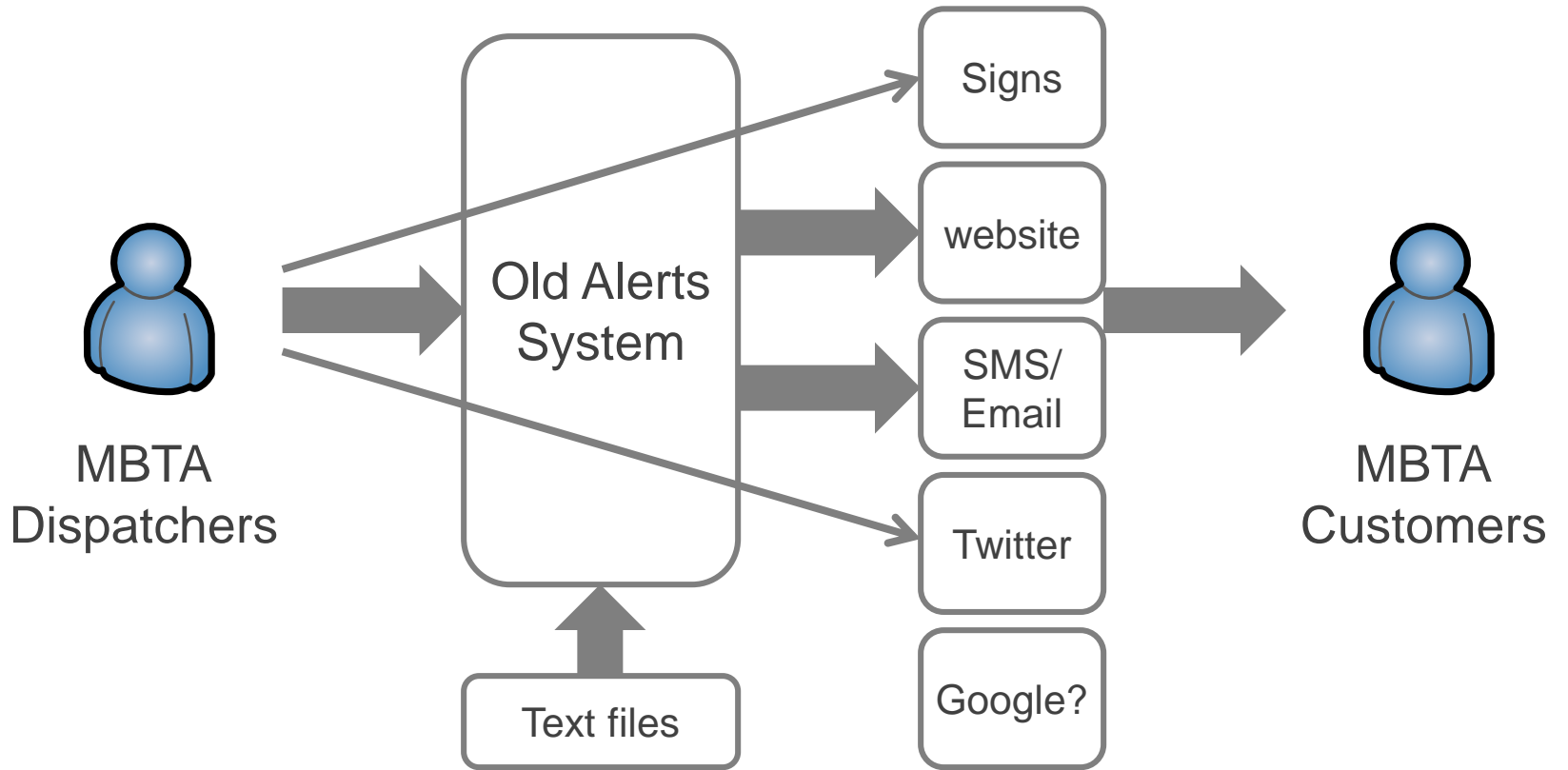
**Route 1** experiencing delays

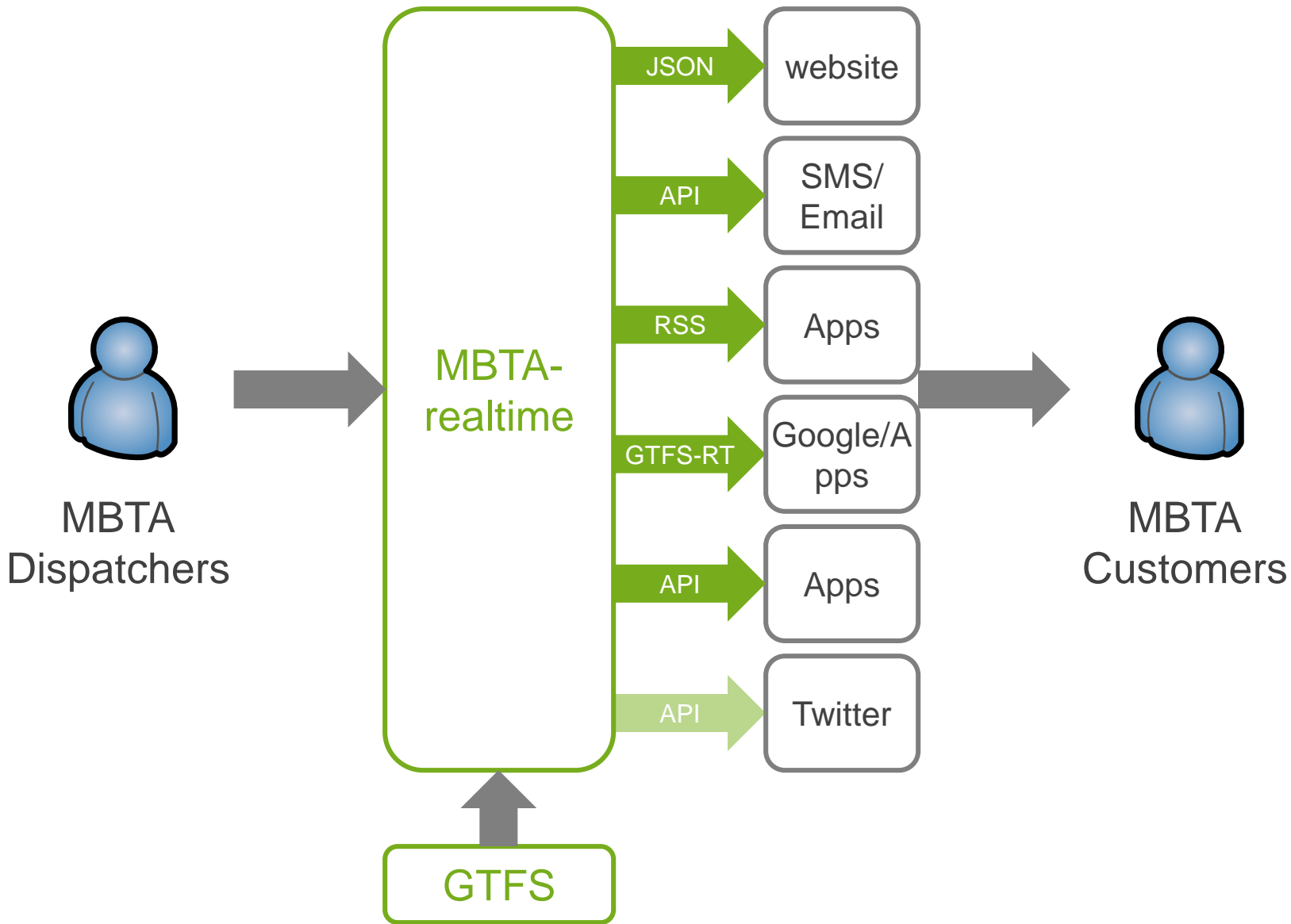
Route 1 experiencing delays in **outbound** direction

Route 1 **Trip 109 (9:00 am from Harvard Square)** experiencing delays in outbound direction

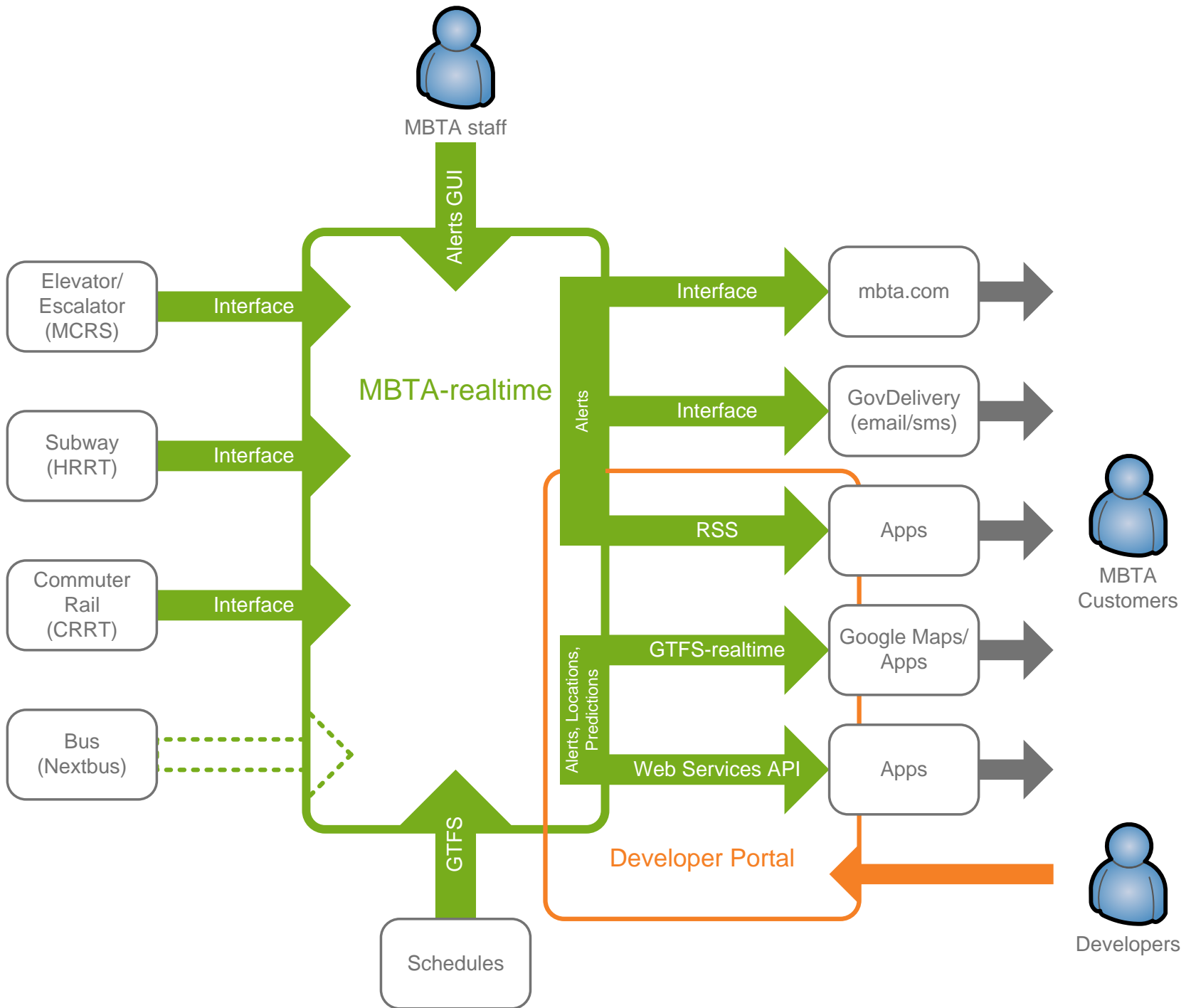
Route 1 Trip 109 (9:00 am from Harvard Square) experiencing delays in outbound direction **between Harvard Square and 84 Massachusetts Avenue**

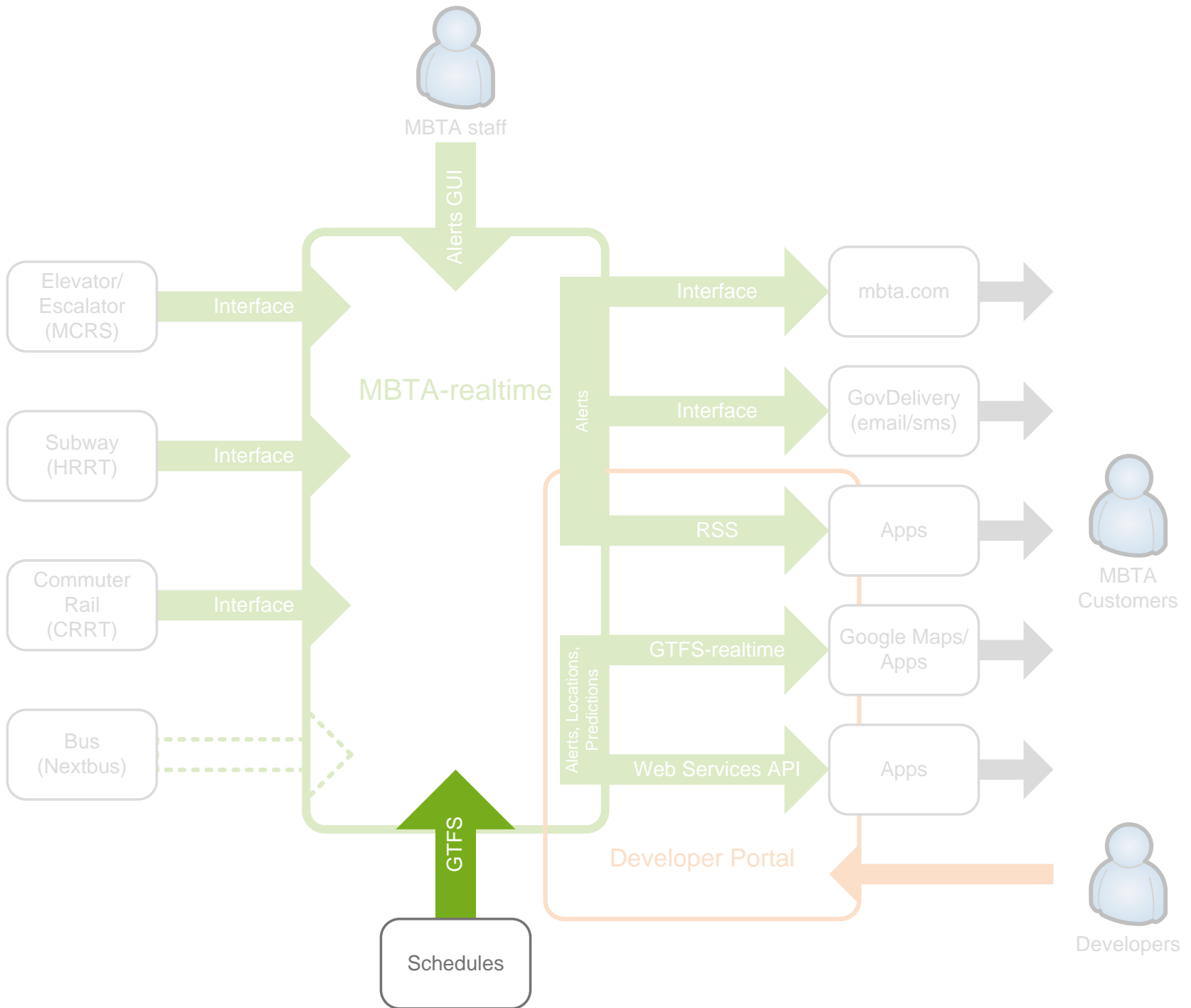






**MBTA-realtime** includes an interface to intuitively create and manage alerts







Route 1 (**route\_id: 01**)

Trip 109 (**trip\_id: 01-109**)

experiencing delays in

outbound direction (**direction\_id: 0**)

between

Harvard Square (**stop\_id: 10096**)

and

84 Massachusetts Avenue (**stop\_id: 10084**)

**MBTA-realttime** integrates with GTFS,  
automatically tagging all real-time data with  
GTFS identifiers



Alerts GUI





# MBTA-realtime

- Bus
- Subway
- Commuter Rail
- Boat
- Elev/Esc
- Systemwide
- Current Alerts
- Future Alerts
- Past Alerts
- Settings

All modes

All Users More Filters >>

Search

ID	Effect	Affected Services	From	To	Tags		
28356	Accessibility	Central Square Station; Elevator 860	May 08	unknown	mcrsautoclear		
28355	Delay	350	10:06 AM	later today			
28354	Delay	238	09:58 AM	later today			
28353	Delay	19	09:44 AM	later today			
28352	Delay	9	09:43 AM	later today			
28351	Delay	47	09:43 AM	later today			
28350	Detour	76; Worthen Rd @ Hayden Rec Ctr (outbound), Worthen ...	09:37 AM	later today			
28348	Delay	Silver Line - SL4, Silver Line - SL5	09:33 AM	later today			
28347	Delay	43	09:20 AM	later today			
28346	Delay	8	09:20 AM	later today			
28345	Delay	108	09:17 AM	later today			
28343	Accessibility	Escalator 388	08:36 AM	unknown	mcrsautoclear, ...		

### Affected Services

Select Multiple Routes

Route	Direction	Stop(s):
CT2	Both	All Stops
CT3	Outbound	Dudley Station (outbound)
Government Center Shutt	Inbound	Washington St opp Ruggles St (outbour
1		Washington St @ Melnea Cass Blvd (ou
4		Melnea Cass Blvd @ Harrison Ave (outt
5		Albany St opp Randall St (outbound)
7		Massachusetts Ave @ Albany St (outbc

Route Map: 1

### Time Range

One-Time Alert Recurring Alert Template



Effect Period: From:  Until:

Show Advanced

### Description

Cause:

Severity:

Message:   

Please confirm



You chose the following:

Preview

Message: Route 1 experiencing minor delays due to construction

Additional Information:

Route: 1

Cause: Construction

Effect: Delay

Alert time type: One-Time Alert

Effect Period: 5/2/2014 10:36 AM to later today

Notification Period: 5/2/2014 10:36 AM to 5/3/2014 2:30 AM

Severity: Minor

**Route 1 experiencing minor delays due to construction**  
Created: Fri May 02, 2014 10:36 AM

Created: Fri May 02, 2014 10:36 AM by *ritesh.warade*

Tags:



**Affected Services**

Route	Direction	Trip(s):	Today
Newburyport/Rockport Lir	Both	All Trains	
Haverhill Line	Outbound	311 (9:10 am from North Station)	
Lowell Line	Inbound	314 (9:15 am from Lowell)	
Fitchburg/South Acton Li		358 (9:15 am from Anderson/ Woburn)	
Framingham/Worcester L		315 (10:10 am from North Station)	
Needham Line		316 (10:15 am from Lowell)	
Franklin Line		317 (11:10 am from North Station)	

Route Map: Lowell Line

**Time Range**

One-Time Alert Recurring Alert Template

Effect Period: From:

Until:

Show Advanced

**Description**

Cause:

Severity:

Message:



Affected Services

Filter by Route

Filter by Route

Stop(s):

Impacted Routes:

	<ul style="list-style-type: none"><li>Airport Station</li><li>Alewife Station</li><li>Allston St. Station</li><li>Andrew Station</li><li>Aquarium Station</li><li>Arlington Station</li><li>Ashmont Station</li></ul>	<ul style="list-style-type: none"><li><b>Subway</b></li><li>Red Line (Ashmont branch)</li><li>Red Line (Braintree branch)</li><li><b>Bus</b></li><li>350</li><li>351</li><li>62</li></ul>
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Time Range

One-Time Alert **Recurring Alert** Template

Effect Days:  Monday  Tuesday  Wednesday  Thursday  Friday  Saturday  Sunday

Effect Time: From: start of service day Until: end of service day

Recurrence Period: From: Tue Jul 01, 2014 Until: Thu Jul 31, 2014

Hide Advanced

Notification Period: From: Mon Jun 16, 2014 start of service day Until: Thu Jul 31, 2014

All modes
★ All Users
Clear filters

Search

Notification From:  X
 Notification Until:  X
 Effect From:  X
 Effect Until:  X

Severity: Any
 Effect: Any
 Cause: Any
 Recurring: Any
 Tags: Any

ID	Effect	Affected Services	From	To	Tags		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tag as... <input type="text"/> Remove tag... <input type="text"/>							
<input type="checkbox"/> 28357	Accessibility	Central Square Station; Elevator 861	May 05	unknown	mcrsautoclear	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 28356	Accessibility	Central Square Station; Elevator 860	May 08	unknown	mcrsautoclear	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 28355	Delay	350	10:06 AM	later today		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 28354	Delay	238	09:58 AM	later today		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 28353	Delay	19	09:44 AM	later today		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 28352	Delay	9	09:43 AM	later today		<input type="checkbox"/>	<input type="checkbox"/>



Intuitive interface

Auto-generated alert messages

Incorporates complete route/schedule information

Alerts tagged with appropriate GTFS IDs

One-click dissemination through all channels

Simple update process for schedules

Easily configurable

# Developer Portal (realtime.mbta.com)



The screenshot shows the MBTA-realtime Developer Portal website. The header features a dark banner with the text "Developer Portal" in white. Below this is a green navigation bar with links for "Home", "Documents", "Download", "Support", and "MBTA.com". On the right side of the green bar are "Register" and "Log in" links. The main content area has a heading "MBTA-realtime Developer Portal" followed by a welcome message and a paragraph about the data being live as of June 4, 2013. A "Getting started" section is partially visible. On the right, there is a "Links" box containing a list of links: "MBTA.com", "MBTA Developers Page", "MBTA App Showcase", "MassDOT Developers Page", and "MassDOT/MBTA Google Group".

## Developer Portal

Home Documents Download Support MBTA.com

Register Log in

### MBTA-realtime Developer Portal

Welcome to the MBTA-realtime developer portal. MBTA-realtime is the MBTA's premier alert and real-time information interface for third-party developers.

As of June 4, 2013, MBTA-realtime alert and schedule data is live and in production. Real-time commuter rail and subway data to follow at a later date. Other data remains available on the general [MBTA Developers Page](#).

Getting started is as easy as 1, 2, 3.

#### Links

- [MBTA.com](#)
- [MBTA Developers Page](#)
- [MBTA App Showcase](#)
- [MassDOT Developers Page](#)
- [MassDOT/MBTA Google Group](#)



# Feeds (click to view)

[GTFS-realtime Protocol Buffer](#)

[RSS](#)

[Web Services API](#)

[Agency website \(mbta.com\)](#)

[Twitter \(coming soon\)](#)

# API calls

## Route Structure

- Routes
- Stops by Route
- Routes by Stop
- Stops by User Location

## Schedule

- Schedule by Stop
- Schedule by Route
- Schedule by Trip

## Alerts

- Alerts
- Alerts by ID
- Alert Headers
- Alert Headers by Route
- Alert Headers by Stop

## General

- Server Time

## Predictions

- Predictions by Stop
- Predictions by Route
- Predictions by Trip
- Predictions by Vehicle

## Vehicle Locations

- Locations by Route
- Locations by ID
- Location by User Location

# Google (via GTFS-realtime feeds)

⚠️ 3:05 PM - 3:22 PM (17 min)  
🚶 91 🚶  
Via: Cambridge St @ Maffa Way (3:06 PM)

**3:05 PM** ○ Sullivan Square Station

🚶 Walk  
✓ 171 ft (1 min)

**3:06 PM** 🚗 Cambridge St @ Maffa Way

⚠️ **Detour. Ends at 6:55 pm**

Routes 83 and 91 diverted around Prospect St between Hampshire St and Broadway due to a working fire. Connections: Hampshire St and Prospect St Broadway and Prospect St 91 towards Central Square via Union Square

✓ 21 stops (16 min)

Western Ave @ Green

Google from Boston, MA to Fitzburg, MA

Get directions My places

Waltham, MA  
North Station, Causeway Street, Boston, MA

Leave now 10/24/13 11:58am

GET DIRECTIONS

Suggested routes

- 11:27am - 11:55am 28 miles ⚠️ Alert
- 12:24pm - 12:50pm
- 11:37am - 12:34pm
- 11:36am - 12:48pm 1 hour 12 mins ⚠️ Alert

Transit directions to Boston North Station, 135 Causeway St, Boston, MA, 02114

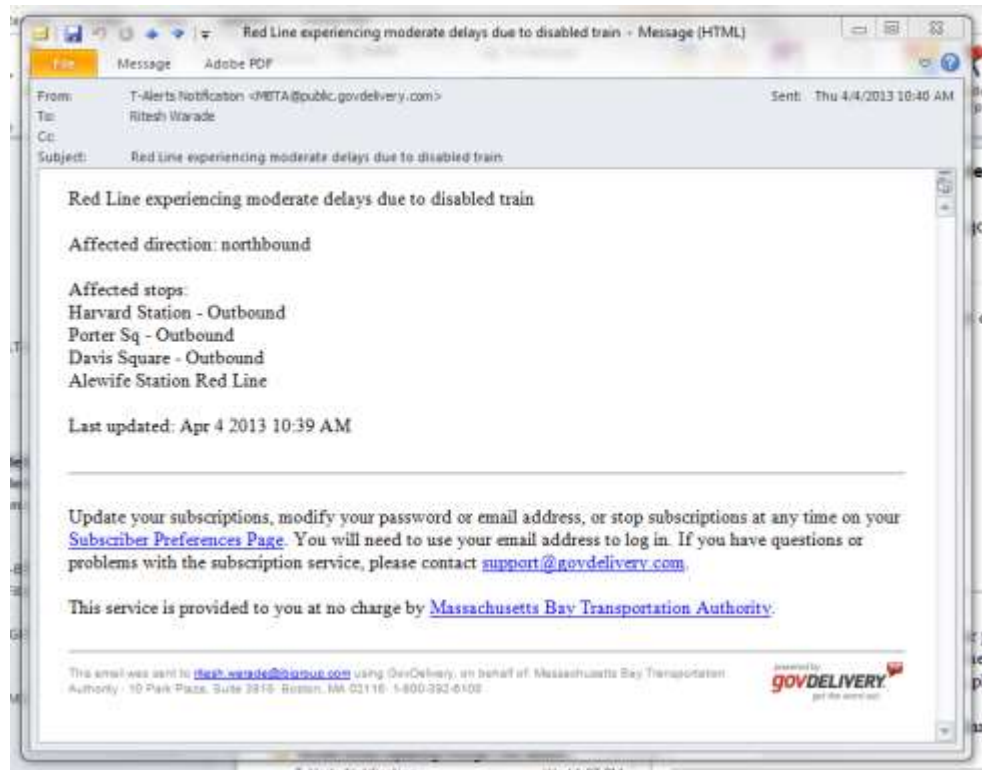
This route has an incident or service disruption.

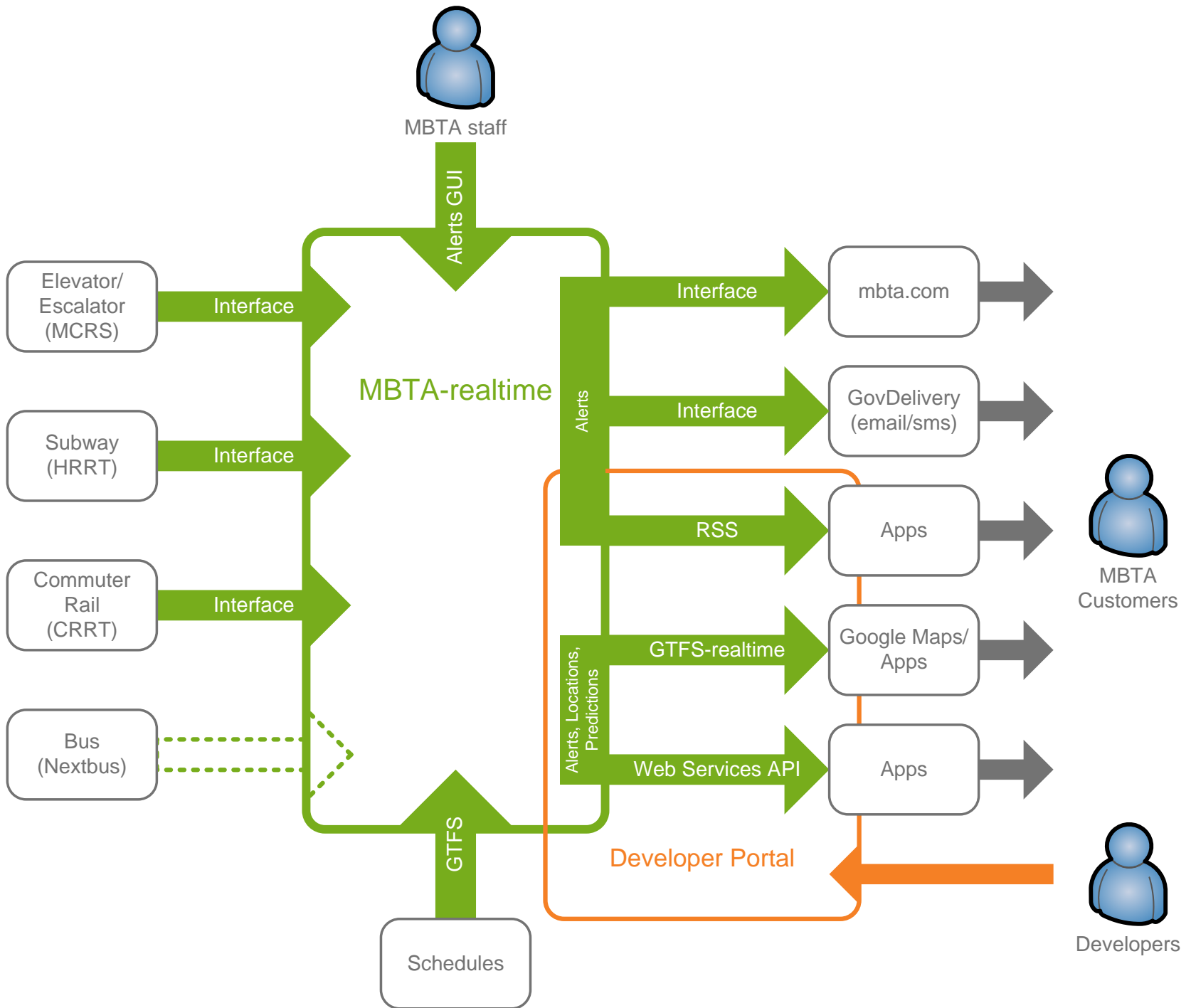
Waltham, MA  
Walk to Waltham About 4 mins (3.2 mi)

Waltham  
Fitchburg/South Acton Line Train towards North Station (Train 418)

Fitchburg/South Acton Line Train 418 (16:27 am) has Fitchburg experiencing 10 to 15 min delays due to roadwork delay.

# SMS/Email (via GovDelivery)





Thank You

Questions?

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