



Scheduling Commuter Rail in a PTC Environment

METRA

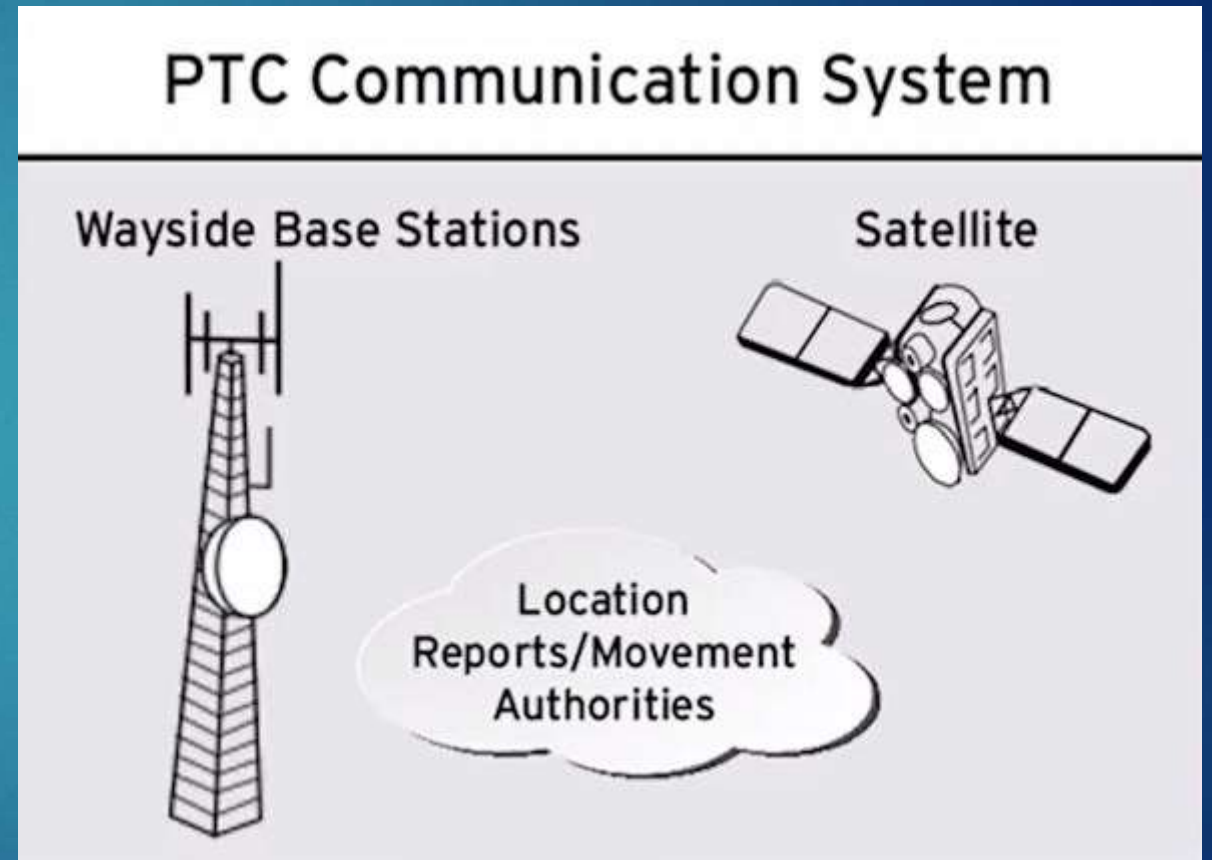
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Agenda

- ▶ What is Positive Train Control (PTC)?
- ▶ How will PTC impact commuter rail?
- ▶ Metra's PTC planning parameters
- ▶ Public outreach
- ▶ PTC going forward at Metra

Positive Train Control (PTC)

- ▶ What is PTC?
 - ▶ Federally mandated safety system
 - ▶ Prevents collisions, unauthorized entry into work zones, and derailments caused by speeding or misaligned track switches
- ▶ How does it work?



Impacts from PTC

- ▶ How will it impact operations?
 - ▶ Longer “flip” times
 - ▶ Crew responsibilities
 - ▶ Slower run times

CURRENT

	1218 a.m.		1371 a.m.
Aurora		Chicago Union Station	7:20
Route 59		Halsted Street	---
Naperville		Western Avenue	---
Lisle		Cicero	---
Belmont		LaVergne	---
Downers Grove		Berwyn	---
Fairview Avenue	6:38	Harlem Avenue	---
Westmont	6:41	Riverside	---
Clarendon Hills	6:44	Hollywood	---
West Hinsdale	6:47	Brookfield	---
Hinsdale	6:50	Congress Park	---
Highlands	---	LaGrange Road	---
Western Springs	---	Stone Avenue	---
Stone Avenue	---	Western Springs	---
LaGrange Road	---	Highlands	---
Congress Park	---	Hinsdale	---
Brookfield	---	West Hinsdale	---
Hollywood	---	Clarendon Hills	---
Riverside	---	Westmont	---
Harlem Avenue	---	Fairview Avenue	---
Berwyn	---	Downers Grove	7:45
LaVergne	---	Belmont	7:48
Cicero	---	Lisle	7:52
Western Avenue	---	Naperville	7:57
Halsted Street	---	Route 59	8:02
Chicago Union Station	7:12	Aurora	8:13



PROPOSED

	1218 a.m.		1371 a.m.
Aurora		Chicago Union Station	7:21
Route 59		Halsted Street	7:27
Naperville		Western Avenue	---
Lisle		Cicero	---
Belmont		LaVergne	---
Downers Grove		Berwyn	---
Fairview Avenue	6:32	Harlem Avenue	---
Westmont	6:35	Riverside	---
Clarendon Hills	6:39	Hollywood	---
West Hinsdale	6:41	Brookfield	---
Hinsdale	6:45	Congress Park	---
Highlands	---	LaGrange Road	---
Western Springs	---	Stone Avenue	---
Stone Avenue	---	Western Springs	---
LaGrange Road	---	Highlands	---
Congress Park	---	Hinsdale	---
Brookfield	---	West Hinsdale	---
Hollywood	---	Clarendon Hills	---
Riverside	---	Westmont	---
Harlem Avenue	---	Fairview Avenue	---
Berwyn	---	Downers Grove	7:48
LaVergne	---	Belmont	7:52
Cicero	---	Lisle	7:55
Western Avenue	---	Naperville	8:01
Halsted Street	---	Route 59	8:06
Chicago Union Station	7:08	Aurora	8:15

Case Study

- ▶ Los Angeles Metrolink
 - ▶ First commuter rail agency with full PTC implementation
 - ▶ “Delays surged last year as Metrolink broke in a new system to prevent accidents.” – *Los Angeles Times*, February 1, 2016
 - ▶ Within first year, 613 delays caused by PTC

Metra BNSF Line

- ▶ 54,751 weekday boardings (2016)
- ▶ Highest ridership in Metra system
- ▶ First Metra line with full PTC implementation



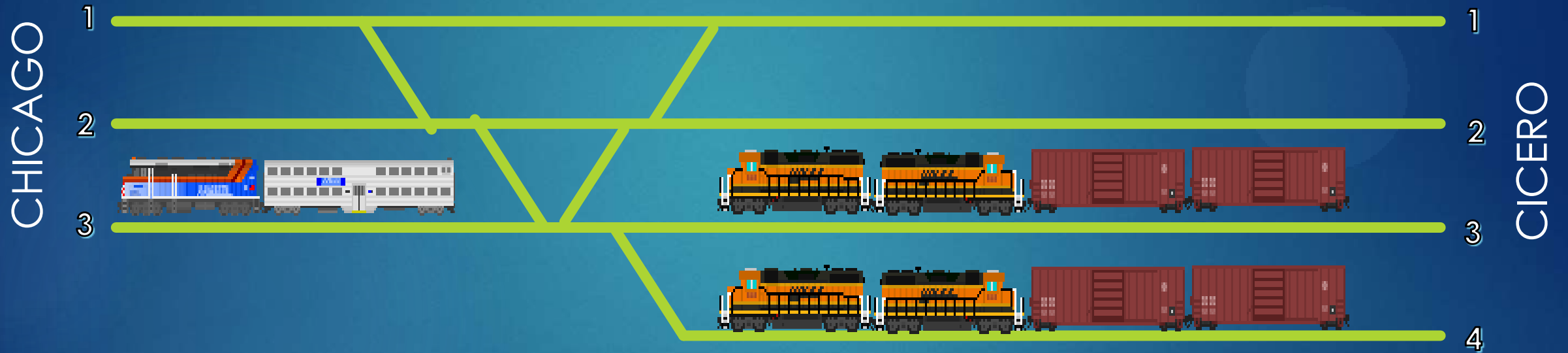
PTC Planning Parameters

- ▶ PTC “flip” time goals
 - ▶ 12 minutes at terminals (Chicago Union Station and Aurora)
 - ▶ 15 minutes mid-route
 - ▶ 30+ current “flip” times violate parameters
- ▶ Additional 6 minutes needed for “flip” time
- ▶ The same amount of trains in a larger window of time

Additional Planning Parameters

- ▶ Alleviate conflicts
 - ▶ Bunching at Cicero
 - ▶ Consistent train slotting during rush hour
- ▶ Address overcrowding
- ▶ Adjust run times
 - ▶ Using GPS and signal data to better schedule station departure times

Cicero Spacing



Public Outreach

- ▶ Black & White schedule
 - ▶ Proposed schedule released to receive public comment
 - ▶ 2000+ responses
- ▶ Comment Review
- ▶ Changes made to address concerns

Next Steps

- ▶ PTC on other Metra lines
 - ▶ Rock Island
 - ▶ Union Pacific
- ▶ Unknown effects of PTC
- ▶ Operations must be monitored to make necessary changes in the future
- ▶ Coordination and outreach