

A Primer on the PSTN
Paul Timmins
Penguicon 2013

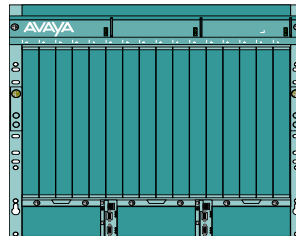
Customer



Local Loop



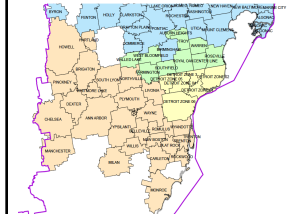
Switching



Transport



Interconnection



LNP

Tandems

**Long Distance
Providers**

What this talk will cover:

**The technical aspects of telephony
(Why? Because it is useful for you to know, useful
to me for you to know, and it's awesome!)**

What this talk will not cover:

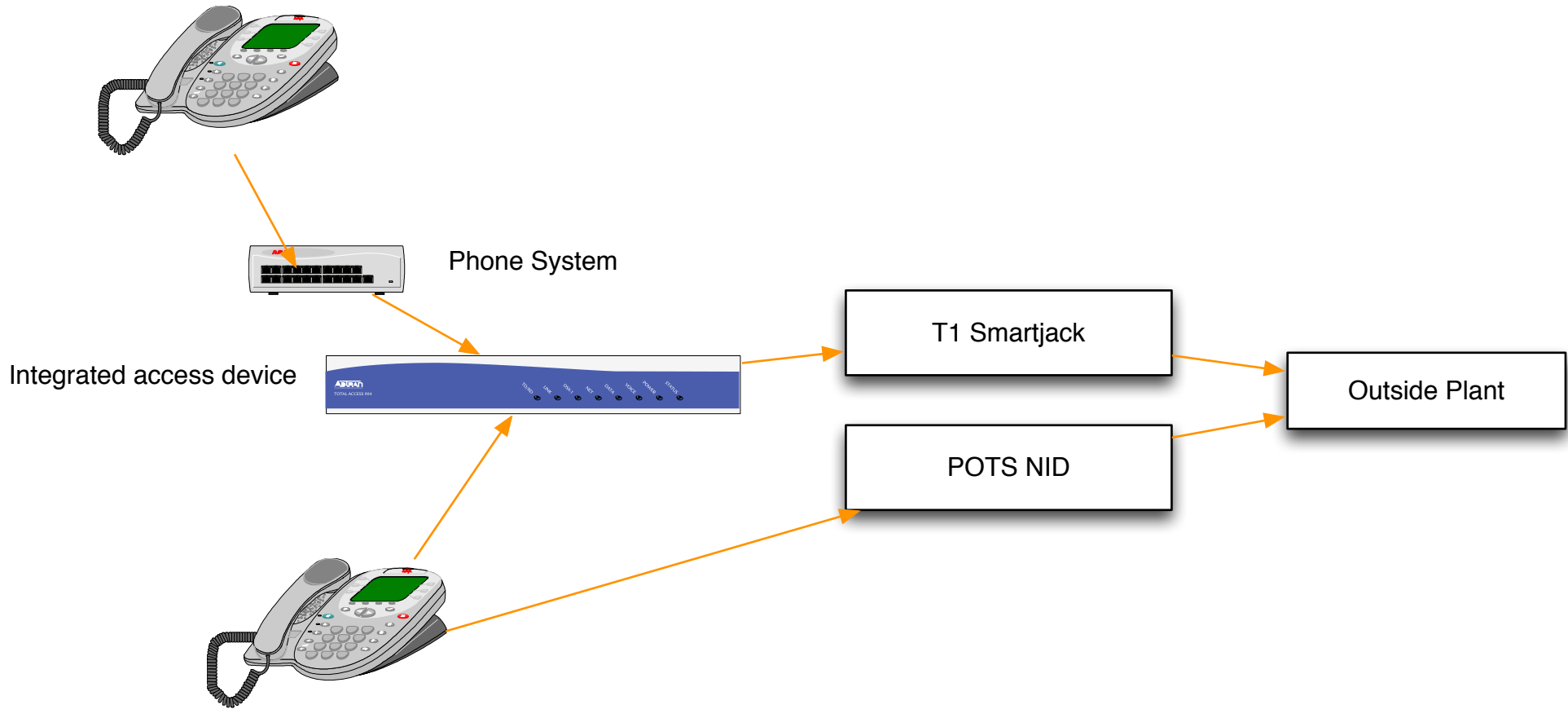
**The legal or business sides of telephony
(Why? Because not only is it key to competing
against my employer, it's also really, really
depressing and boring unless you're the right
person)**

Disclaimer: I work for a midwestern telephone company as the senior network engineer. I run the world's largest and most popular free telecommunications database at <http://www.telcodata.us/>

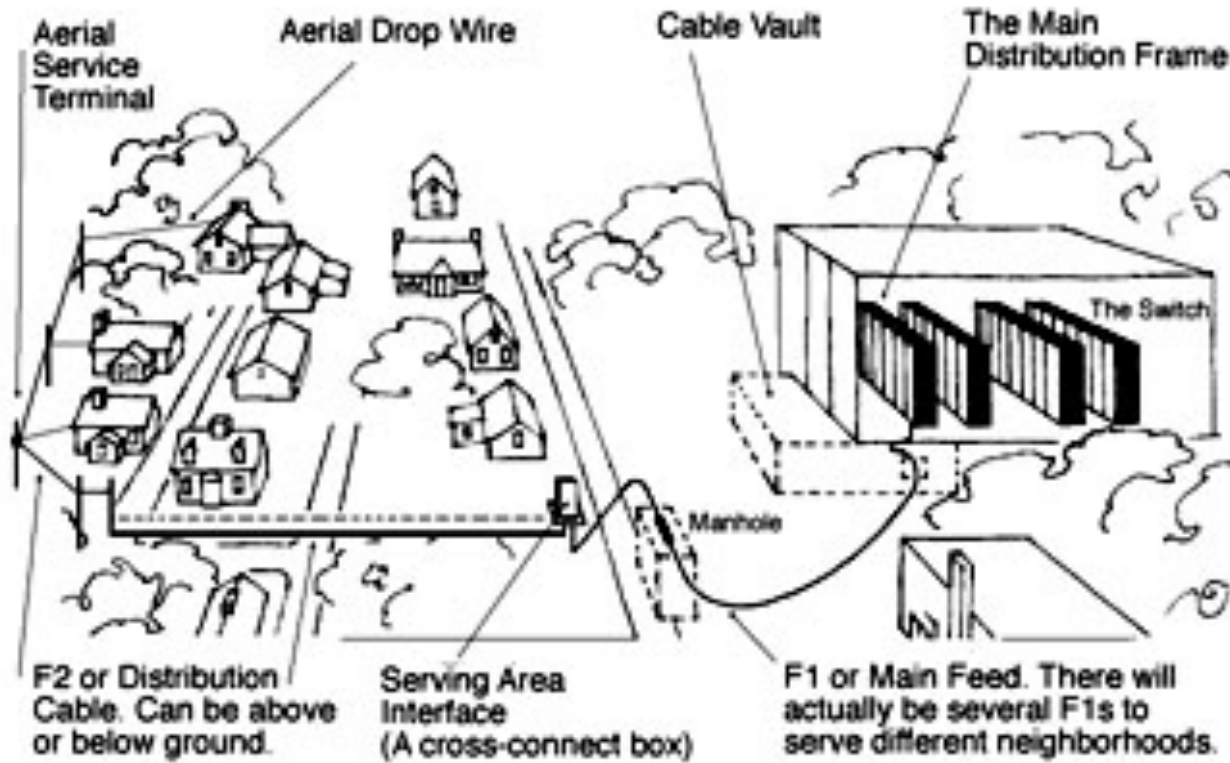
During this talk, I officially speak for neither.

Additionally, I will not answer questions, on or off the record, that in my sole judgement may materially assist you in competing against either company. I am contractually prohibited from helping you compete with my employer. It's nothing personal.

Customer Side



Local Loop - Outside Plant



Credit: <http://www.privateline.com>

What's on the side of your house?



POTS Network Interface Device (a/k/a Demarc)

Used to provide a demarcation point between your wiring and the phone company's wiring







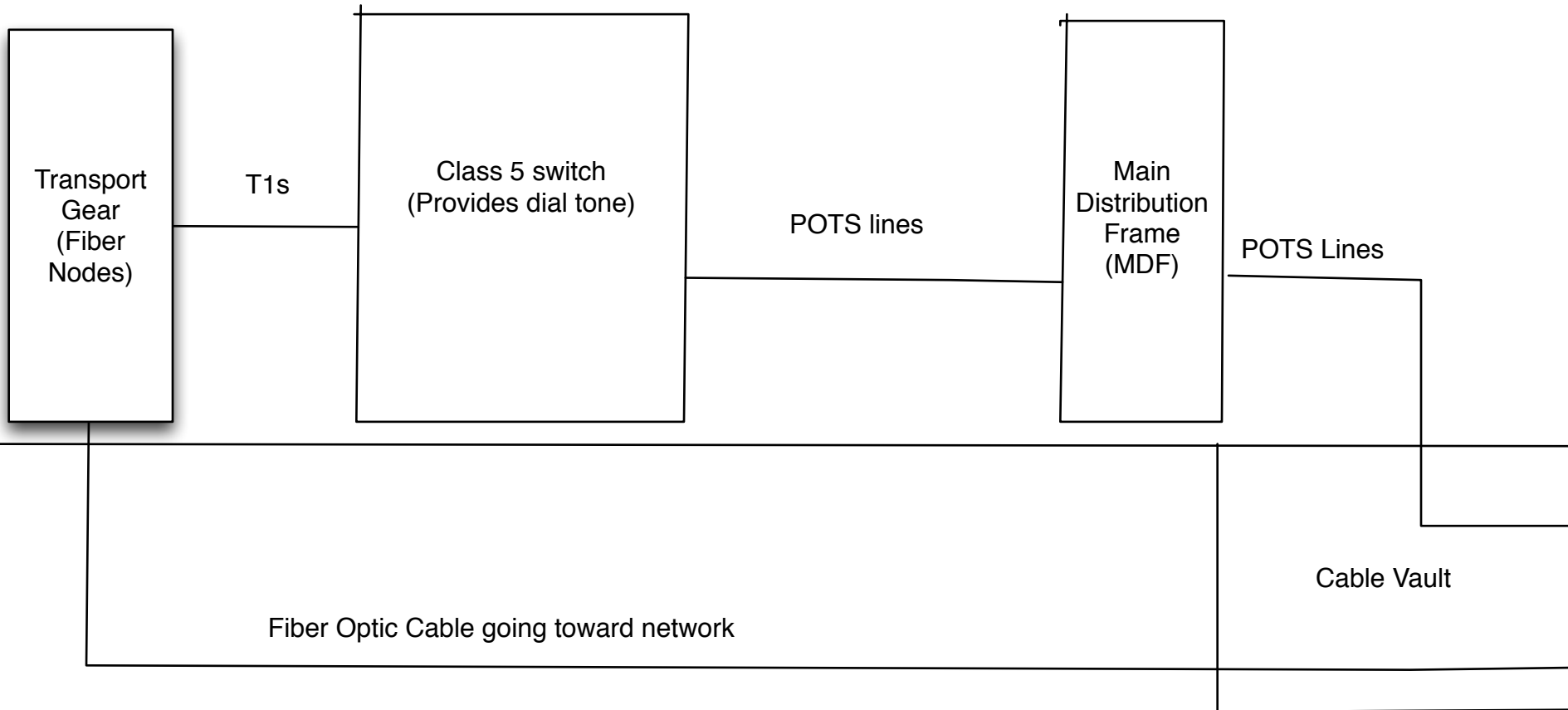
T1 Smartjack

Converts T1 signals to HDSL2
(or HDSL4) and back again

What's on that pole?



The Central Office



Cable Vault

LOG IN or JOIN

The Big Story: Samsung Galaxy S4 review



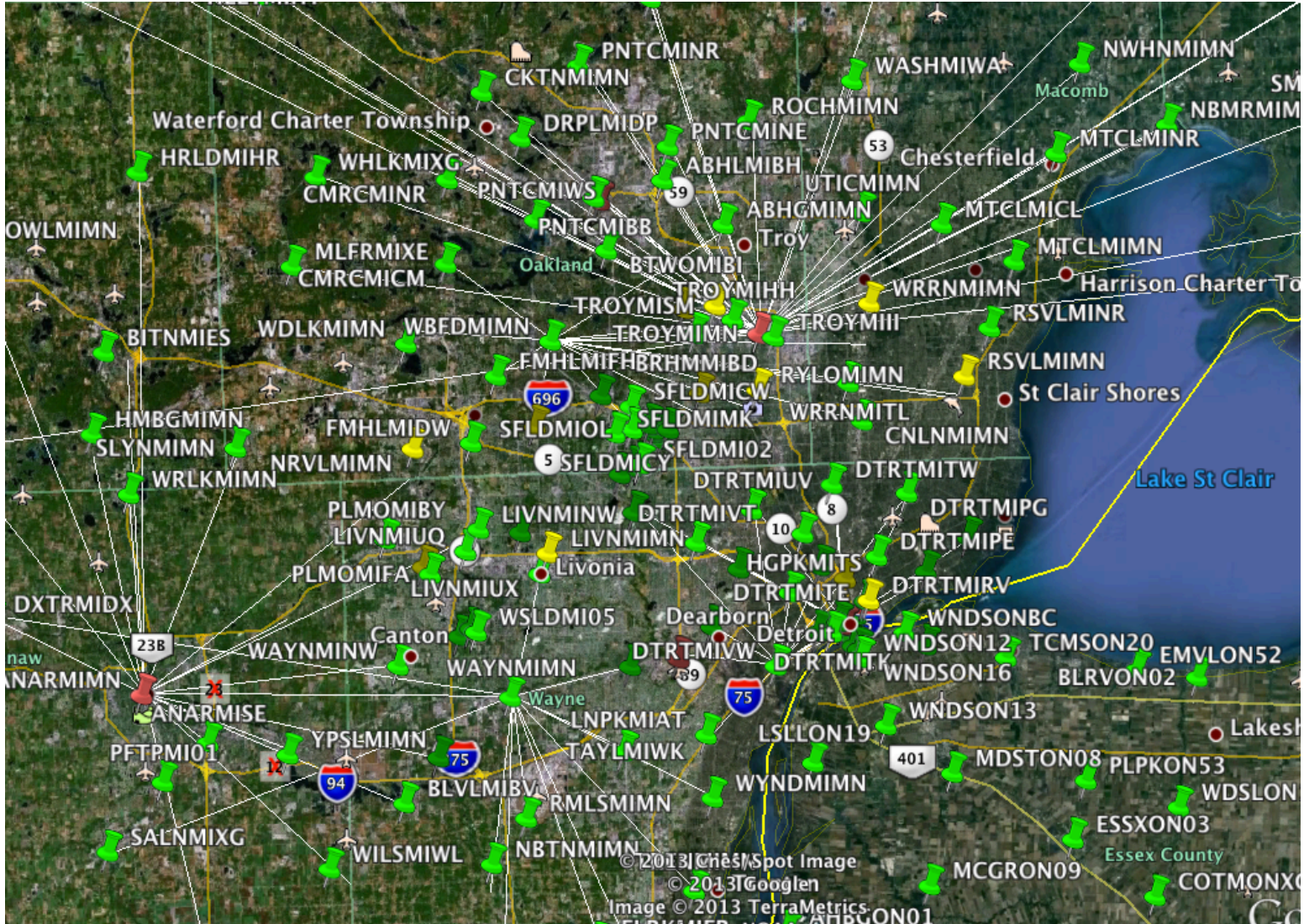
Photo: The Verge - "Into the vault: the operation to rescue Manhattan's drowned internet"
<http://www.theverge.com/2012/11/17/3655442/restoring-verizon-service-manhattan-hurricane-sandy>

Manholes



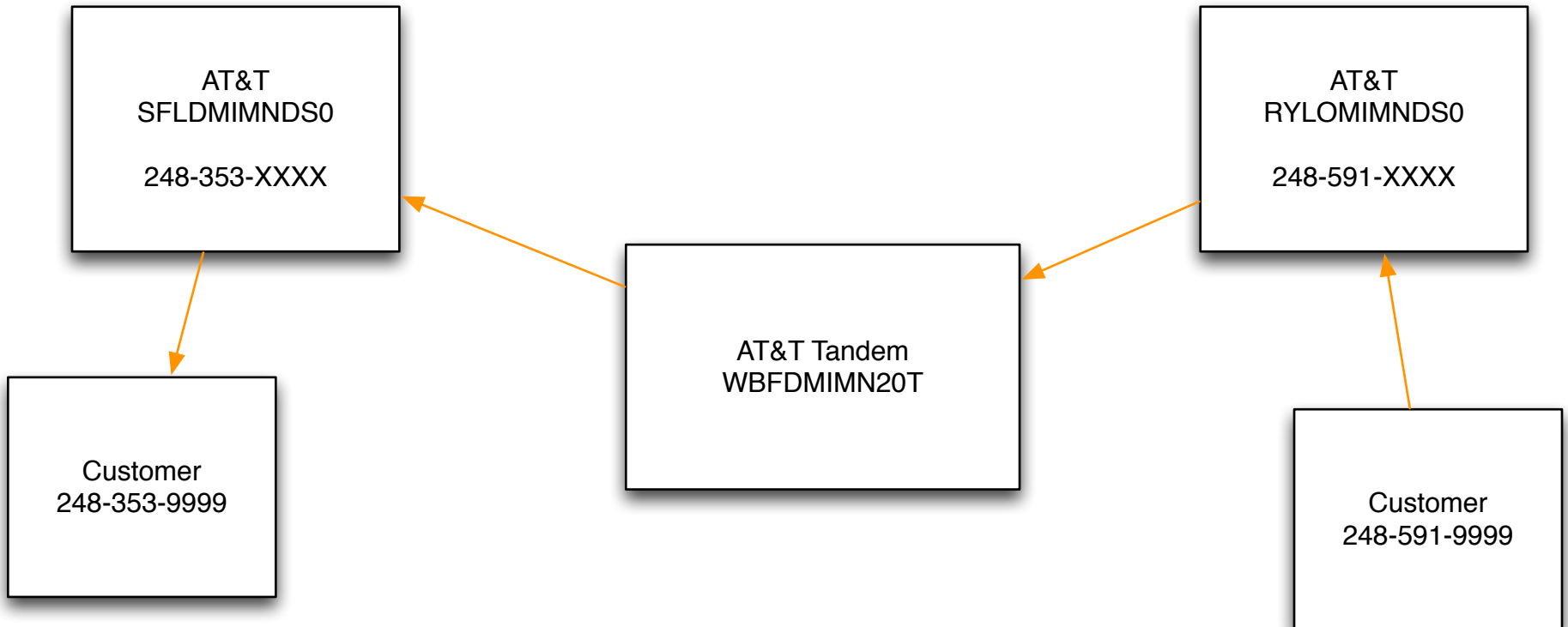
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Tandem Network



Tandems - Simplified

Local Call



Tandems - Simplified

Long Distance Call

