

The Sunday Brief: MWC Preview – Why AI Needs Telecom

Greetings from Louisiana, Colorado, Texas, Mexico, and Spain. We are taking a few days in Madrid prior to heading to the Mobile World Congress where Jim will be, a guest of [Nagarro](#), a European-headquartered digital product engineering and technology consulting firm.

As we stated in the last Brief, we will also be attending C3 Transform in Florida the week after next. If you will be there, look me up in the C3 app or send an email to sundaybrief@gmail.com.



Today's opening picture comes from our visit this morning to El Rastro ("The Trail"), one of the largest street markets in the world on Sundays (more on its history is [here](#)). The center of the picture shows a mass of charging cords from electronics days gone by, and a reminder of the progress the industry had made in adopting the USB standard. It also shows some vintage cell phones, which reminds us of the fact that many consumers prefer the devices that they are familiar with (versus the latest and greatest).

We have added several hundred subscribers since the beginning of the year (your referrals are always welcome as we do not advertise or market the Brief), so it's likely that we will use a portion of the next Brief to give some context about why it exists, how it got started, and why it's become one of the "must reads in telecom" (that came from one my senior executive meetings this week). If you are not familiar with the telecom industry, and you want to learn where value is currently being created (or will be created), this is one of the best free resources available.

The Fortnight That Was

FAB FIVE		Shares outstanding (end of yr unless noted)			Stock Price (last trading day of year)			Equity Value (\$B)			2024 YTD PERFORMANCE							
Stock Name	Ticker	Dec-21	Dec-22	Dec-23	Dec-21	Dec-22	Dec-23	Dec-21	Dec-22	Dec-23	23-Feb	% change	Value Gained/Lost (\$B)	Current market cap	9-Feb	16-Feb	1-wk change	2-wk change
Apple	AAPL	16,319.4	15,821.9	15,441.9	\$ 177.57	\$ 129.93	\$ 192.53	\$ 2,898	\$ 2,056	\$ 2,994	\$ 182.52	-5%	\$ (155)	\$ 2,818	\$ (57)	\$ (158)	\$ 3	\$ (98)
Alphabet (Google)	GOOG	661.0	12,807.0	12,433.0	\$ 2,893.59	\$ 88.73	\$ 140.93	\$ 1,913	\$ 1,136	\$ 1,764	\$ 145.29	3%	\$ 54	\$ 1,806	\$ 116	\$ 10	\$ 44	\$ (61)
Microsoft	MSFT	7,496.9	7,443.8	7,430.4	\$ 336.32	\$ 239.82	\$ 376.04	\$ 2,521	\$ 1,785	\$ 2,795	\$ 410.34	9%	\$ 255	\$ 3,049	\$ 331	\$ 208	\$ 47	\$ (76)
Amazon	AMZN	508.8	10,247.3	10,387.4	\$ 3,334.34	\$ 84.00	\$ 151.94	\$ 1,697	\$ 861	\$ 1,570	\$ 174.99	15%	\$ 239	\$ 1,818	\$ 234	\$ 183	\$ 57	\$ 6
Facebook/ Meta	FB	2,765.9	2,592.6	2,549.0	\$ 336.35	\$ 120.34	\$ 353.96	\$ 930	\$ 312	\$ 910	\$ 484.03	37%	\$ 332	\$ 1,234	\$ 291	\$ 304	\$ 27	\$ 41
Totals								\$ 9,959	\$ 6,150	\$ 10,033			\$ 725	\$ 10,725	\$ 914	\$ 547	\$ 178	\$ (189)
Change								\$ 2,467	\$ (3,809)	\$ 3,883								
Cumulative Change								\$ 6,626	\$ 2,817	\$ 6,700								

TELCO TOP FIVE		Shares outstanding (end of yr unless noted)			Stock Price (last trading day of year)			Equity Value (\$B)			2024 YTD PERFORMANCE							
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AT&T	T	7,126.0	7,129.9	7,150.0	\$ 24.60	\$ 18.41	\$ 16.78	\$ 175	\$ 131	\$ 120	\$ 16.80	0%	\$ 0	\$ 120	\$ 0	\$ 1	\$ (1)	\$ (0)
Verizon	VZ	4,197.8	4,199.9	4,204.1	\$ 51.96	\$ 39.40	\$ 37.70	\$ 218	\$ 165	\$ 158	\$ 40.66	8%	\$ 12	\$ 171	\$ 8	\$ 12	\$ 1	\$ 4
T-Mobile	TMUS	1,249.3	1,219.4	1,186.9	\$ 115.98	\$ 140.00	\$ 160.33	\$ 145	\$ 171	\$ 185	\$ 164.34	3%	\$ 5	\$ 195	\$ 2	\$ 0	\$ 5	\$ 3
Comcast	CMCSA	4,533.2	4,216.1	3,971.9	\$ 50.33	\$ 34.97	\$ 43.85	\$ 228	\$ 147	\$ 176	\$ 41.90	-4%	\$ (8)	\$ 166	\$ (7)	\$ (10)	\$ 3	\$ (1)
Charter	CHTR	172.7	152.7	145.2	\$ 651.97	\$ 339.10	\$ 388.68	\$ 113	\$ 52	\$ 57	\$ 299.42	-23%	\$ (13)	\$ 43	\$ (14)	\$ (14)	\$ 1	\$ 1
Totals								\$ 879	\$ 667	\$ 698			\$ (3)	\$ 696	\$ (10)	\$ (11)	\$ 8	\$ 7
Change								\$ (106)	\$ (212)	\$ 31								
Cumulative Change since 1/1/2019								\$ 196	\$ (16)	\$ 15								
Relative market cap								11.33	9.23	14.38				15.41				

The Fab Five had a decent week (+\$178 billion) and it wasn't driven by any of their group's earnings. Nvidia had a strong earnings report (here) and their rising tide lifted all boats. The previous week, however, was a bloodbath, driven by higher inflation than most analysts expected. As a result, we have higher yields (10-year Treasuries are in the 4.2-4.3% range – CNBC chart [here](#)) which impact borrowing costs and provide a decent alternative to equity volatilities. Bottom line: about half of the week of Feb 12th's loss was regained last week, and the Fab Five's year-to-date gains are still very healthy at \$725 billion.

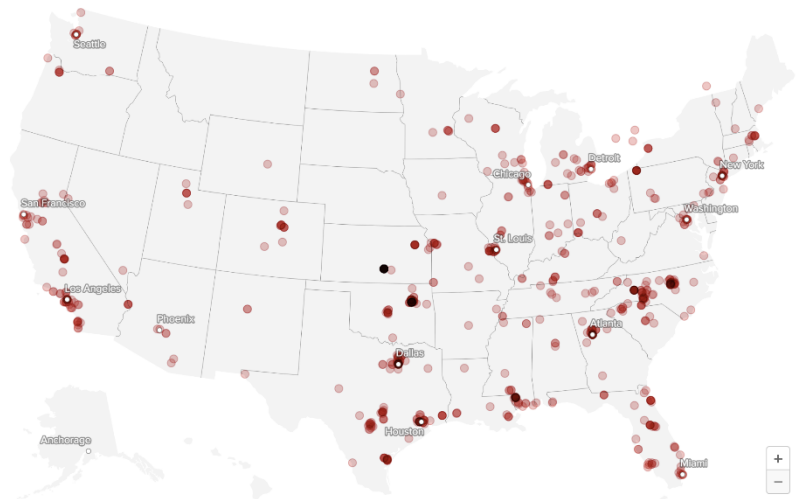
AT&T made the news cycle this week with an outage that impacted hundreds of thousands of customers (map courtesy of [this CBS News article](#)). The outages were attributed to an “application and execution of an incorrect process used as we were expanding our network” (see [here](#) for their latest updates).

Early Sunday morning, AT&T also announced that they would be crediting postpaid consumer accounts impacted by the outage (why business accounts and Cricket/ AT&T Prepaid were not credited remains a mystery). Per the footnote in the announcement, it appears that the credit is capped at \$5/ account. If that is the case, it’s likely to total as much as \$140 million (roughly 2% of quarterly AT&T Mobility EBITDA) as AT&T has around 28 million consumer postpaid accounts. Our guess is that the impact may be lower than that.

We think that AT&T made the right move with the postpaid credit (we would have extended it to all subscribers), and disagree with some pundits that the company is not ready for Open RAN. This outage likely had little to do with their move to a virtualized core, and more likely had more to do with someone not following a process (AT&T has more than 22,000 fewer employees since the beginning of 2022).

AT&T outages and reported problems

The map shows the concentration of user-submitted problem reports over the last 24 hours to Downdetector. The darker red areas show higher concentrations of reports.



Note: Data as of 10 a.m. EST on Feb. 22, 2024.
Map: Taylor Johnston / CBS News • Source: Downdetector

Mobile Net Additions (000s) By Quarter				
Period	Comcast	Charter	Altice	Total
2Q 2017	42	-	-	42
3Q 2017	152	-	-	152
4Q 2017	187	-	-	187
1Q 2018	196	-	-	196
2Q 2018	204	-	-	204
3Q 2018	228	21	-	249
4Q 2018	227	113	-	340
1Q 2019	170	176	-	346
2Q 2019	181	208	-	389
3Q 2019	204	276	15	495
4Q 2019	261	288	54	603
1Q 2020	216	290	41	547
2Q 2020	126	325	34	485
3Q 2020	187	363	18	568
4Q 2020	246	315	7	568
1Q 2021	278	300	5	583
2Q 2021	280	265	6	551
3Q 2021	285	244	1	530
4Q 2021	312	380	5	697
1Q 2022	318	373	11	702
2Q 2022	317	344	34	695
3Q 2022	333	396	5	734
4Q 2022	365	615	4	984
1Q 2023	355	686	8	1,049
2Q 2023	316	648	16	980
3Q 2023	294	594	24	912
4Q 2023	310	546	34	890
TOTAL (000s)	6,588	7,766	322	14,677

Altice and Frontier announced earnings since our last Brief. We do not do a lot of regular reporting and analysis on these companies but do look at Altice’s mobile phone net additions (note – unlike Spectrum/ Charter and Comcast, Altice does not use Verizon as their underlying Mobile Network Operator or MNO). The nearby table shows the cumulative impact through the fourth quarter.

Altice was the only carrier to post a gain from 4Q 2022 to 4Q 2023. We think cable’s anemic net add performance originates from two factors: a) the carriers’ mobile bases are getting larger and, as a result, churn begins to have an outsized impact, and b) competition, particularly from AT&T, is heating up as they are offering additional wireless discounts to customers who move to their fiber product.

However, for the year, Comcast added 1.275 million net new wireless customers, Charter added 2.475 million, and Altice grew 82 thousand. Add in 100-125 thousand for Cox, and the cable industry collectively added close to 4 million net new customers in 2024. As a collective group, they outgrew industry leader T-Mobile – no small feat.

As we mentioned in the last Brief, we are disappointed in the fourth quarter results from Comcast and Charter. Assuming 2.1 connections per household passed, Comcast has a mobile relationship with roughly 3.1 million homes (5% of passings) while Spectrum has a relationship with 3.7 million (6.5% of passings). As competition increases, can cable grow wireless faster? Will other corporate activities (e.g., Comcast’s Peacock division combining streaming operations with Paramount + as described in [this Wall Street Journal article](#)) reduce focus on wireless? We think that cable must come out swinging even harder on wireless if they are going to retain that share of each home’s communication spending. And, as we mentioned in the last Brief, the critical KPI needs to be “re-won broadband RGUs” whether that comes from a customer moving in or an existing customer win back.

Finally, Berkshire Hathaway's CEO Warren Buffett released his annual letter to shareholders on Saturday (link [here](#)). We like to read this to get a general overview of (capitally intense) American businesses and find his humility refreshing (Despite a remarkable long-term track record, Berkshire's stock underperformed the S&P Index in 2023 by 10.3% and has underperformed the S&P three out of the last five years). His comments on Berkshire's utility investments and the corresponding regulatory challenges are particularly insightful.

MWC Preview – Why AI Needs Telecom

The Mobile World Congress (MWC) kicks off tomorrow in Barcelona. There will be many announcements – new phones, tablets, partnerships, even ecosystems. But, as we discussed when previewing January's Consumer Electronics Show (read that [Brief here](#)), everything discussed will be coated with Artificial Intelligence (AI).

This week's [Brief](#) builds on our thoughts from January. AI applications can only be as successful as the completeness, longevity and accuracy of their underlying data. For the mobile industry, this includes the full and complete profile of the wireless subscriber. That history consists of communications, location, and device activity. And wireless communication, while important, provides only one portion of the overall communications experience – broadband usage from devices other than the handset make up the other.

To some applications, home usage matters little. It's unlikely that Uber cares much about the in-home profile (except, perhaps, for Uber Eats). But Uber cares a lot about the location history in each mobile profile. In contrast, a home security application probably doesn't care about mobile movement but is highly dependent on reliable home broadband services.

In between is a vast array of applications that depend highly on both mobile and home profiles. Who offers the most complete profiles of home and mobile usage? Verizon and AT&T. If one were to take the usage, location, and device history of early Verizon Fios customers (assuming they were also Verizon Wireless customers – a good supposition), the resulting profiles be highly accurate for AI applications. The only thing missing might be the particular video channels watched for streaming channels (re: as the underlying ISP to the home and smartphone, wireless carriers can easily identify traffic terminating to Netflix or Hulu or YouTube) but the profile would show a decade or more of accurate and complete communications patterns.

Google and Apple (and Amazon through their Fire and Alexa products) have also been building user profiles through their Android and iOS operating system information. Google (and to a lesser extent, Apple) also collects a large amount of location data through their Maps application. But, because they do not own the physical layer, they do not get a full picture. They create very good profiles but cannot duplicate the opportunity presented by Fios and AT&T Fiber. Said differently, Apple knows every time an Apple TV is used, but does not know each time an Android device is used in the same home. Verizon knows both if the customer is a wireless + FiOS subscriber.

Cable, as mentioned above, knows as much as Verizon about a small sliver of their customer base (5–6.5% of the homes in their footprint to be exact). They know a lot about how smartphones access in-home Wi-Fi, but out-of-home mobile data is not available to strengthen those profiles. If certain applications demand data for all of New Orleans (or Northern Virginia, or the Kansas City), however, one cable company cannot provide that information as well as AT&T or Verizon.

We are in the very early innings of profile establishment, and customer consent will be required to sell a specific (defined as a non-anonymized, non-aggregated) profile. Models are highly dependent on accurate, long-lived and complete data. There is no pretense that there is anything "Open" about this or future generations of AI. AI presents a monetization opportunity that's as large or larger than the mobile carriers faced when they opened up location services to Google and Apple and other applications.

Bottom Line: Communications, location, and device activity builds strong profiles. This information can meaningfully strengthen models that drive Artificial Intelligence applications. This could be a material value generator for integrated telecommunications carriers.

That's it for this week. In two weeks, we will debrief on both the Mobile World Congress and the C3 conference. Until then, if you have friends who would like to be on the email distribution, please have them send an email to sundaybrief@gmail.com and we will include them on the list (or they can sign up directly through the website).

Until then, let's congratulate the [back-to-back Super Bowl champion Chiefs](#) and root for Davidson College [Baseball](#) and [Basketball](#)!