

July 2, 2007

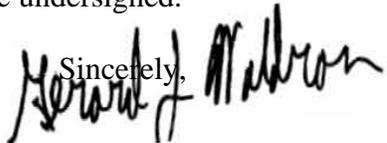
Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th St., SW
Washington, DC 20554

Re: WT Docket Nos. 96-86, 06-150; PS Docket No. 06-229

Dear Ms. Dortch:

Attached please find a slidedeck prepared by Frontline's economists, responding to recent filings by Verizon Wireless and CTIA. It summarizes the competitive and revenue benefits of the Frontline Plan and details the economic problems with the Verizon proposal.

Please direct any questions concerning this matter to the undersigned.

Sincerely,


Gerard J. Waldron
*Counsel to Frontline
Wireless, LLC*

Verizon's Spectrum Grab



Summary of Economic Arguments

Economic Studies Show Competitive and Revenue Benefits of the Frontline Plan

- “The Design of the 700 MHz Spectrum Auction: An Opportunity to Promote Competition and Public Safety,” Andrzej Skrzypacz and Robert Wilson 23 May 2007
- “Economic Comments on the Design of the 700 MHz Spectrum Auction,” Peter Cramton, Andrzej Skrzypacz, and Robert Wilson 11 June 2007
- “Auction Revenues in the 700 MHz Spectrum Auction,” Peter Cramton, Andrzej Skrzypacz, and Robert Wilson 25 June 2007

Under the Frontline Plan, Any E Block winner will provide:

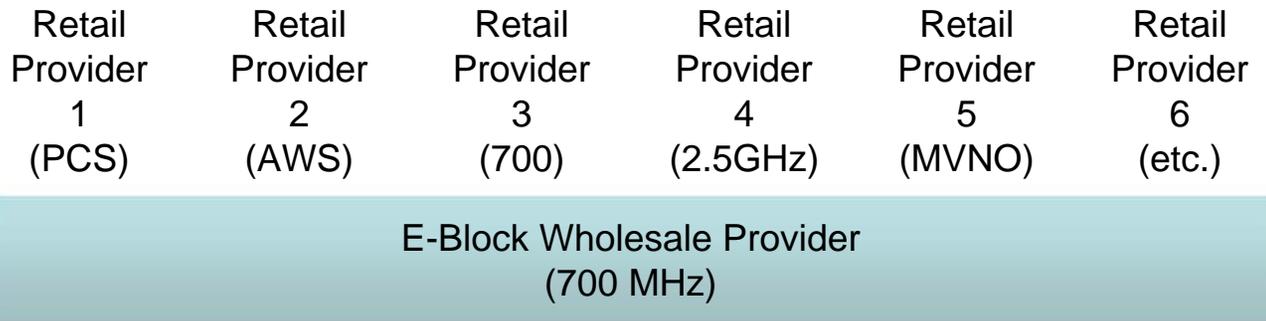
- Nationwide buildout, not to the current limited footprint of the incumbents,
- Nondiscriminatory service, and not foreclosing rivals from access
- 4G service
- An open network as to standards, content, devices, and customers
- Network facilities for public safety so that public safety gets a built-for-free network.

Open-Access Model Promotes Competition

“Rents”

Verizon
Walled
Garden
Services
(e.g., Voice,
SMS)

Verizon
National
Spectrum/
Coverage
(800 Mhz)

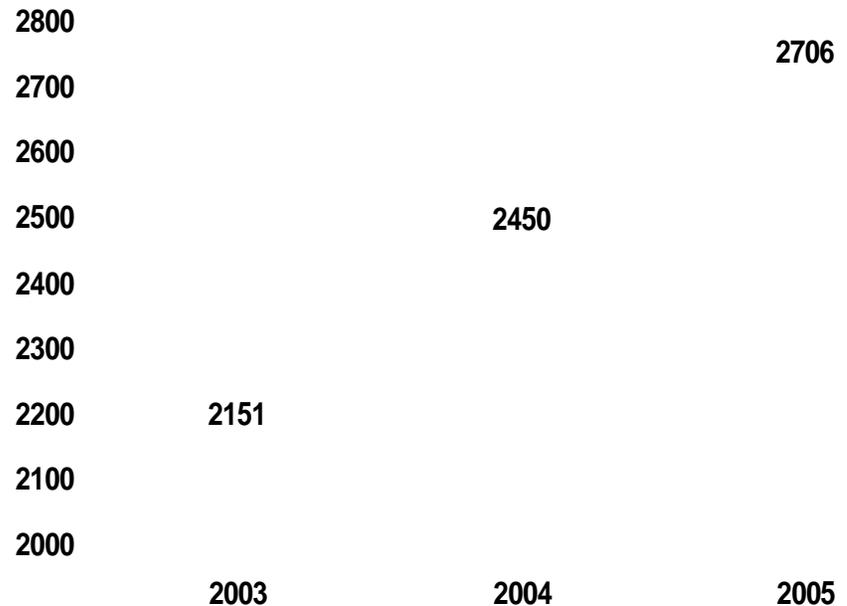


E Block removes barriers to competition, decreases incumbent economic rents:

1. Decreases rents at retail services layer by providing wholesale access to bottleneck resource, i.e., national low-frequency coverage
2. Decreases rents at network layer via open auction, open pricing, etc.

Wireless has Become Concentrated

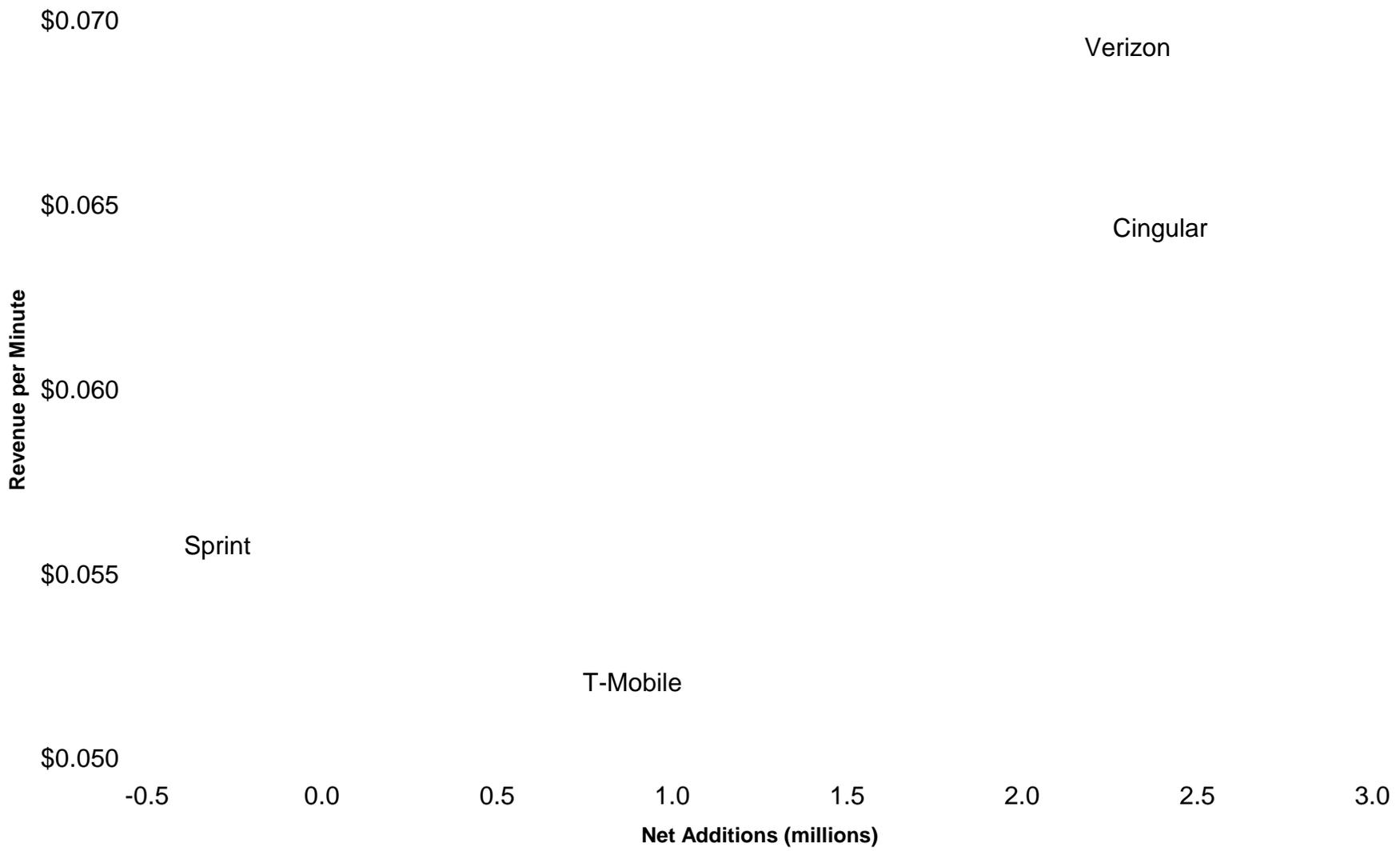
- CTIA ignores huge changes in concentration over the past four years
- Concentration does not benefit consumers



Source: FCC 9th, 10th and 11th CMRS Reports

Verizon & AT&T Dominant on Price and Share

Key Operator Metrics, Q4 2006



Verizon and AT&T Dominate

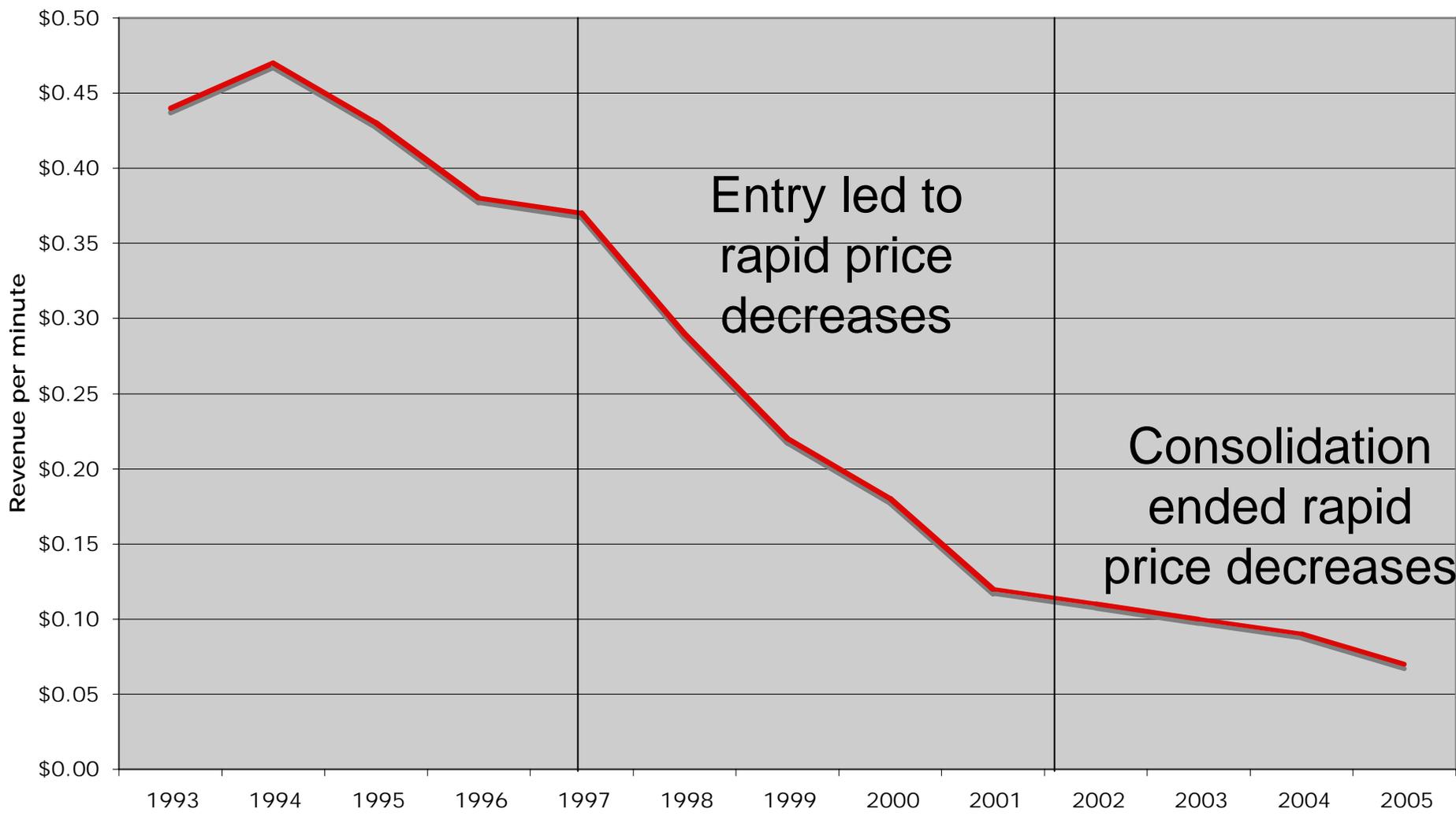
	Verizon	AT&T	Combined
Average Spectrum	60 MHz	75 MHz	135 MHz
Wireless Subs	59 Million	61 Million	120 Million
Subscriber Share	25%	26%	51%
Share of Net Additions	32%	32%	64%
Operating Cash Flow	\$22.6 Billion	\$17.8 Billion	\$40.4 Billion

- Inheritors of original free 800 MHz Cellular licenses, which provide a big coverage and quality advantage
- Aim to warehouse spectrum, especially low-frequency 700 MHz licenses, to block competitors.
- Support any public policy (e.g., large license sizes, open bidding) that allows them to use their scale to advantage.

Incumbent Rent Protection

- Incumbents bid to protect their profits
- Entrants deterred from even showing up since they have little chance of winning when auction is skewed to benefit incumbents
- Incumbents win in 2 ways: preventing competition and paying very little for spectrum
- See paper by Cramton, Skrzypacz, and Wilson
- ““We don't have any great sense of urgency for it,” he said, but added that “we'd love to have it.” RCR quoting AT&T CEO, *Randall Stephenson at Lehman Bros. Conference*

CTIA Price Slide Shows the Competition Problem



Entry led to rapid price decreases

Consolidation ended rapid price decreases

Source: FCC 11th Competition Report

Technology, not competition has reduced prices

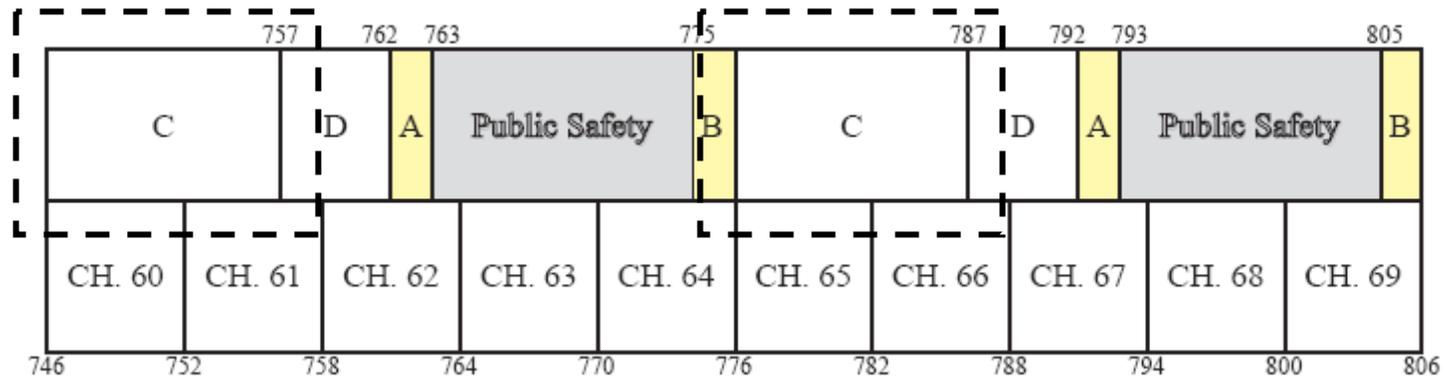
- Technology has advanced
 - Computer prices have dropped much faster
 - Computer quality has increased much more
- Digital revolution has driven increases in network performance
 - Today's CDMA 1x networks have 3 times the call capacity of original CDMA networks and 15-20 times the capacity of analog networks
 - Advances keep coming, for example: the latest Qualcomm vocoder increases call capacity by a further 40% through a software upgrade to the network
- Wireless prices have increased
 - Monthly prices have increased
 - All 4 major carriers increased text messaging prices 50%
 - Per minute voice prices have barely budged since the last two giant mergers

Verizon Plan Will Stop Entry with its own “Earmark”

- Verizon wants *Verizon's* band plan
- Verizon wants *Verizon's* geographic areas (large geographic areas and no package bidding)
- Verizon wants these because they harm new entrants and protect *Verizon's* position
- No surprise *Verizon* is pulling out all the stops to prevent new entrants – AT&T did the same thing to MCI.

Verizon's Plan is Designed to Facilitate Blocking Competitors

Verizon want large blocks and no packages

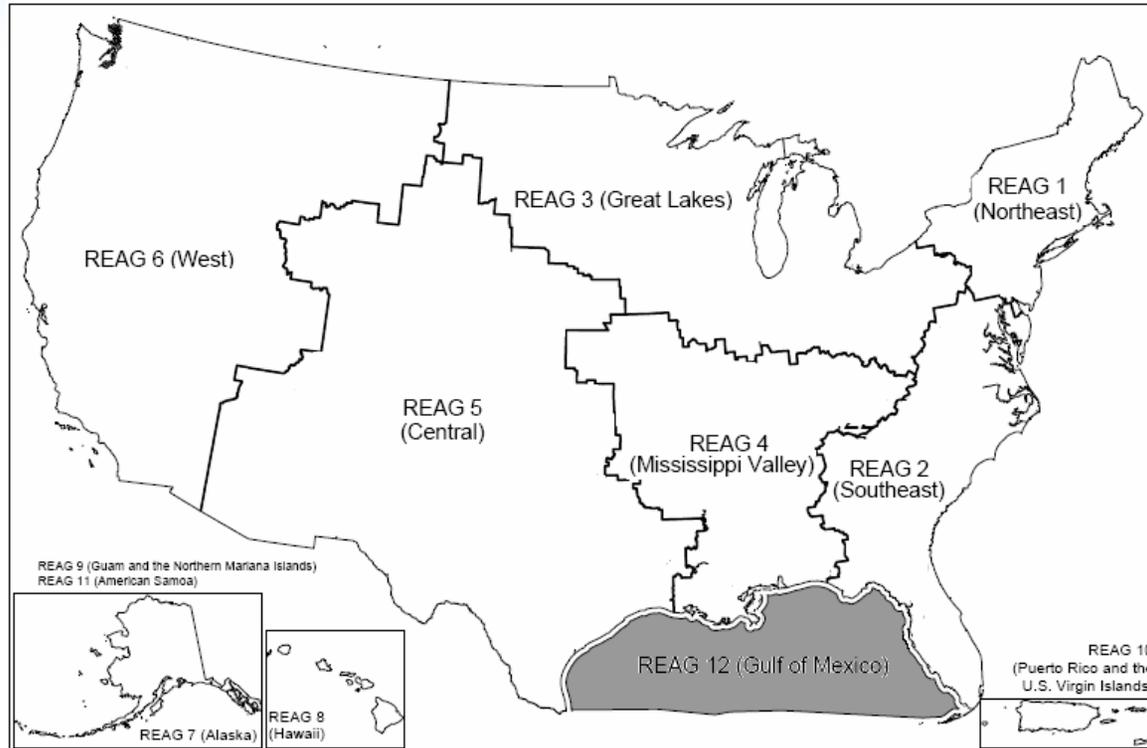


“The Upper 700 MHz Band Plan Should Be Licensed On A REAG Basis, Including One 20 MHz Or Larger Paired Block License”

“There is no reason for the Commission to propose providing a combinatorial bidding opportunity for the purpose of combining large regional licenses into a nationwide license.”

– Verizon Comments

Verizon's Plan Requires Deep Pockets



License Area	Population	MHz-Pops
1. Northeast	50,058,090	1,001,161,800
2. Southeast	49,676,946	993,538,920
3. Great Lakes	58,178,304	1,163,566,080
4. Mississippi Valley	31,326,973	626,539,460
5. Central	40,343,960	806,879,200
6. West	49,999,164	999,983,280

Who Will Bid on Verizon's Huge Blocks?

- Sprint has announced it will not bid
- T-Mobile just spent \$4.1B on spectrum in AWS-1
- DBS dropped out of AWS REAG bidding at close to half of final value and was/is worried about exposure risk
- SpectrumCo has asked for EA sized licenses
- Leap and Metro PCS want CMA licenses
- Who else? Verizon and possibly AT&T
 - Each bought different halves of country in AWS → incentive to get non-overlapping licenses in 700 MHz and swap afterward
- In short: REAG licenses = not a lot of competition

Risks of Verizon Plan

- Verizon Plan drives away bidders and spectrum is sold to Bells as if “earmarked” for them – infamous giveaway
- Verizon Plan will lock up in Bell warehouse the spectrum needed for competition in future – land-grab
- AT&T buys Dobson, revealing future elimination of local competition – the Bell twins re-monopolize America

Benefits of Frontline Plan

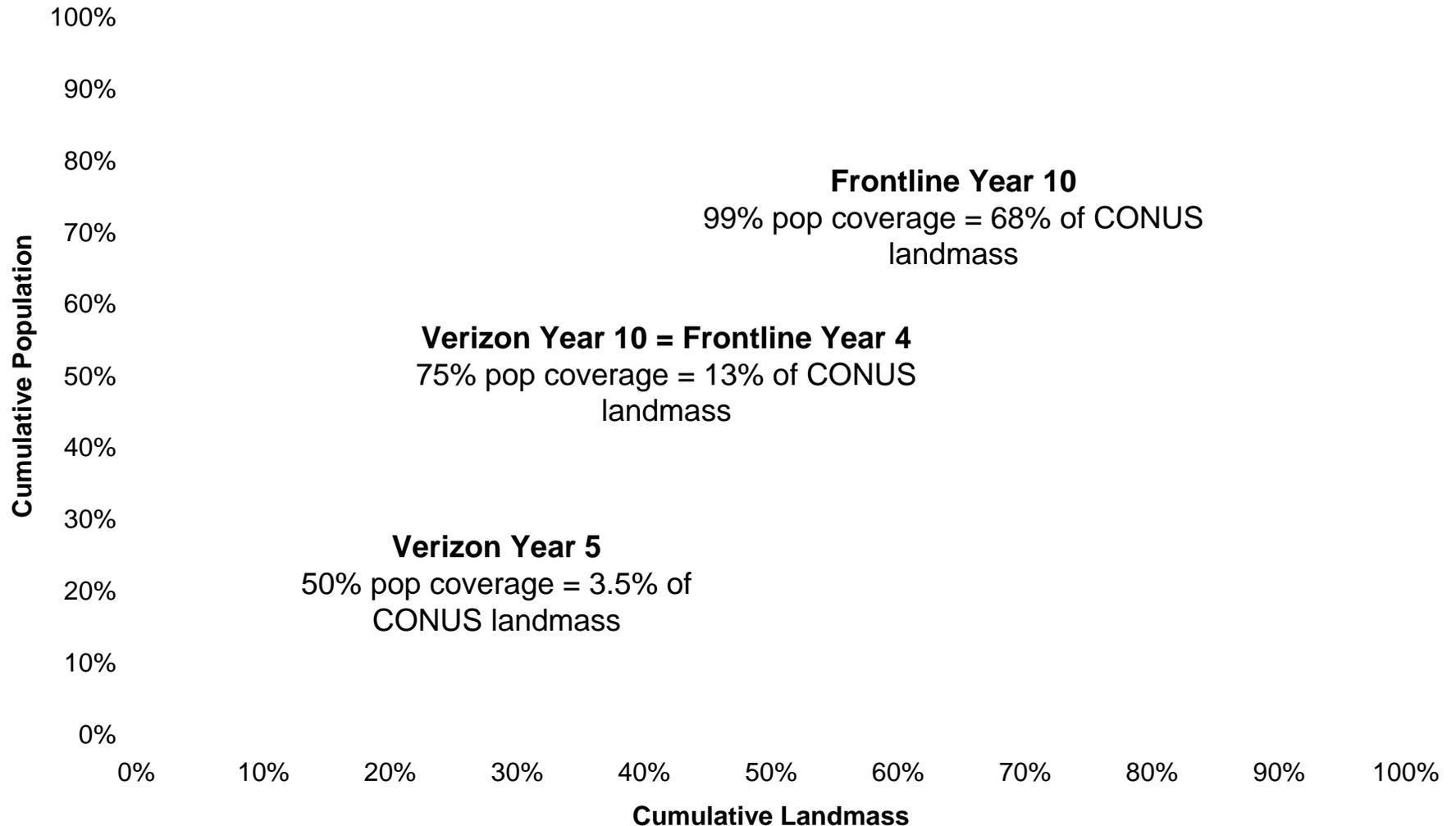
- The remaining Dobsons, Leaps, and Metros get access to a national network – local competition thrives
- The next iPhone gets choice of national providers, encouraging innovation and higher penetration
- Police and firefighters get a built-for-free network – and APCO has less to do in future

Verizon's Plan Hurts Consumers

- Bundles to increase monthly price
- Verizon advertises “unlimited” data plans but cuts off consumers:
 - “Anyone using more than 5 GB per line in a given month is presumed to be using the service in a manner prohibited above, and we reserve the right to immediately terminate the service of any such person without notice.”

Verizon's Plan Leaves out 25% of the People!

Continental US counties sorted by population density



Competitive E-Block Plan has Plenty of Spectrum for Incumbents

- Verizon and AT&T already have well more than 50 MHz of spectrum across the country
- There will be an additional 50 MHz of 700 MHz spectrum available for their business plans
- The Frontline plan opens only 10 MHz of 78 MHz of 700 MHz spectrum – but Verizon and AT&T want it all!

Entry Promotion = Big Benefits

- Long distance competition
- Personal computer competition
- Internet competition
- All lead to HUGE consumer benefits

Frontline's Plan Creates Competition to Benefit Consumers

- Open entry
 - no set aside for Frontline -- anyone can compete who is willing to provide service that will increase competition (even Verizon!)
- Open access
- Wholesale roaming
- Benefits small regional and competitive wireless carriers
- Most of all, benefits consumers

APPENDIX: OPEN E BLOCK PROPOSAL

“When we did the Pilot, we designed whatever product we wanted to design. We distributed anywhere we wanted to distribute it. We priced it the way we wanted to price it and we branded it the way we wanted to brand it. When we did the Treos, that's not true any more. We have constraints on every single one of those items. It's hard. The carriers dictate things so much.”

– Jeff Hawkins, Palm Co-Founder
CNET Interview, June 4, 2007

What is Open?

Open means...

Standards

- Use open internet standards and provides access to key network interfaces

Content

- Provide access to any kind of content, service, or application

Devices

- Attach any kind of device, without special permission or approval

Customers

- Create new kinds of retail services, including services that compete for incumbent customers or traffic

Openness Defined

Frontline Proposal

Network/Business Layer

Customers MVNOs, Roaming Partners, Device Makers, etc.

Devices Smartphones, Laptops, Media Players, Gaming Devices, Automobiles, Appliances, etc.

Network Interfaces QoS, Location APIs, etc.

Transport TCP/IP, UDP

Air Interface WiMAX, LTE, UMB, EVDO, etc.

Open means...

- Any customer can buy service via an auction or mandatory roaming
- Any compatible device can connect to network with do-no-harm rules
- Any network interface available to application providers on RAND terms
- Any lawful traffic must be permitted to pass over the network
- Any wireless technology standard may be used with the network

Implementing Open Access

Layer	Rule
<i>Customers</i>	<ul style="list-style-type: none">▪ E Block licensee shall provide roaming service on a reasonable and non-discriminatory basis to any requesting CMRS operator whose customers are using compatible equipment▪ E Block licensee shall be required to provide service to public safety users, entities that provide retail service and products to end users, and providers and operators of critical infrastructure as defined in Section 2(4) of the Homeland Security Act of 2002
<i>Devices</i>	<ul style="list-style-type: none">▪ E Block Licensee may not block the connection of any terminal equipment to the network provided that the terminal equipment complies with specifications published and filed with the Commission by the E Block Licensee, except that such terminal equipment shall not cause harm to the network or to uses of the network
<i>Network Interfaces</i>	<ul style="list-style-type: none">▪ On all licenses owned or controlled by the E Block Licensee, offer on a reasonable and non-discriminatory basis network quality-of-service and geolocation capabilities to Internet content, application, and service providers
<i>Transport</i>	<ul style="list-style-type: none">▪ E Block licensee prohibited from blocking users from accessing services or content provided by unaffiliated parties, or otherwise engaging in unreasonable discrimination against such services or content, except with the consent of the user or as required by law
<i>Air Interface</i>	<ul style="list-style-type: none">▪ E-Block shall consist of paired 7 MHz channels from 756-763 MHz and 786 to 793 MHz

Empowering Other Spectrum



**Devices with
Multiband,
Multimode
Chipsets**



700 MHz E Block Coverage Network

- Ubiquitous 4G coverage “backbone”
- Guaranteed out-of-market roaming
- Better infill coverage for high network reliability



Local/Regional Capacity Networks

- Provide additional capacity in local areas
- Use PCS, AWS, EBS/BRS, other 700 MHz, or unlicensed spectrum

E Block Increases Social Value of Other Spectrum

1. Competitors to big two need coverage network in order to compete
2. Competitors need access to below 1 GHz network to match up against airwaves handed out in pre-auction era and now owned by Verizon and AT&T
3. Multi-band devices can talk to networks at multiple frequencies (e.g., 700MHz and 2.5 GHz)
4. Availability of open E Block roaming therefore empowers 200+ MHz of other spectrum to compete with incumbents

3 Simple Steps

- 1. Public Safety Licensee.** Create Public Safety Licensee (PSL) using the bottom 12 MHz of the Public Safety Allocation.
- 2. Upper 700 MHz Bandplan.** Implement the following blocks, geographies, and service rules, representing a combination of the various proposals that have been submitted:
 - 2x7 MHz E Block with nationwide license area and wholesale/open access service rules
 - 2x5 MHz D Block with REAG license areas
 - 2x5 MHz C Block with CMA license areas
- 3. Public Safety Network Sharing.** Require the PSL and E Block licensee to enter into good-faith negotiations for a period of months following the conclusion of the auction but empower the PSL to reach network-sharing deal with any network operator, including other 700 MHz licensees, 800 MHz licensees, or PCS licensees.

“It would be extremely difficult to furnish 'good' telephone service if telephone users were free to attach to the equipment, or use with it, all of the numerous kinds of foreign attachments which are marketed by persons who have no responsibility for the quality of telephone service but are primarily interested in exploiting their products.”

– AT&T (1955)

“Data Plans and Features...may ONLY be used with wireless devices for the following purposes: (i) Internet browsing; (ii) email; and (iii) intranet access... The Data Plans and Features MAY NOT be used for any other purpose.”

– Verizon Wireless Terms of Service (2007)