

OVERVIEW OF KEY PUBLIC SAFETY & HOMELAND SECURITY REGULATORY ISSUES

Presentation to
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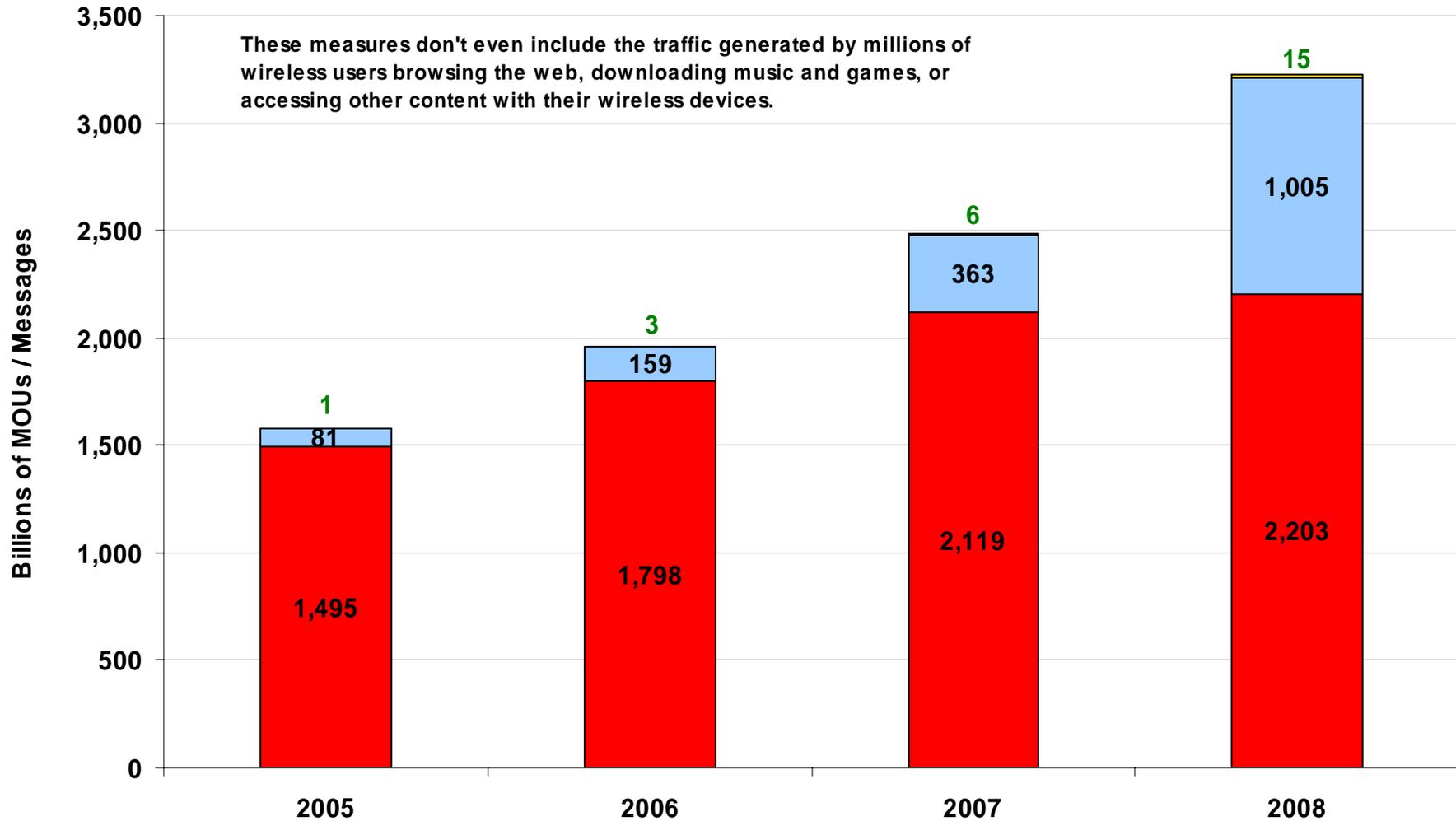
CTIA – The Wireless Association®
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THE U.S. WIRELESS INDUSTRY

- There are now more than 270 million wireless subscribers nationwide.
- The FCC's 13th Annual CMRS Competition Report has found that 98.5% of Americans live in census blocks in which two or more wireless service providers offer services; 95.5% live in census blocks with three or more mobile operators; and 90.5% live in census blocks with four or more wireless service providers.
- Wireless minutes of use reached 2.2 trillion for 2008.
- The average wireless customer has approximately 759 minutes of use per month.

Using Trillions of MOUs & Text Messages & Billions of MMS

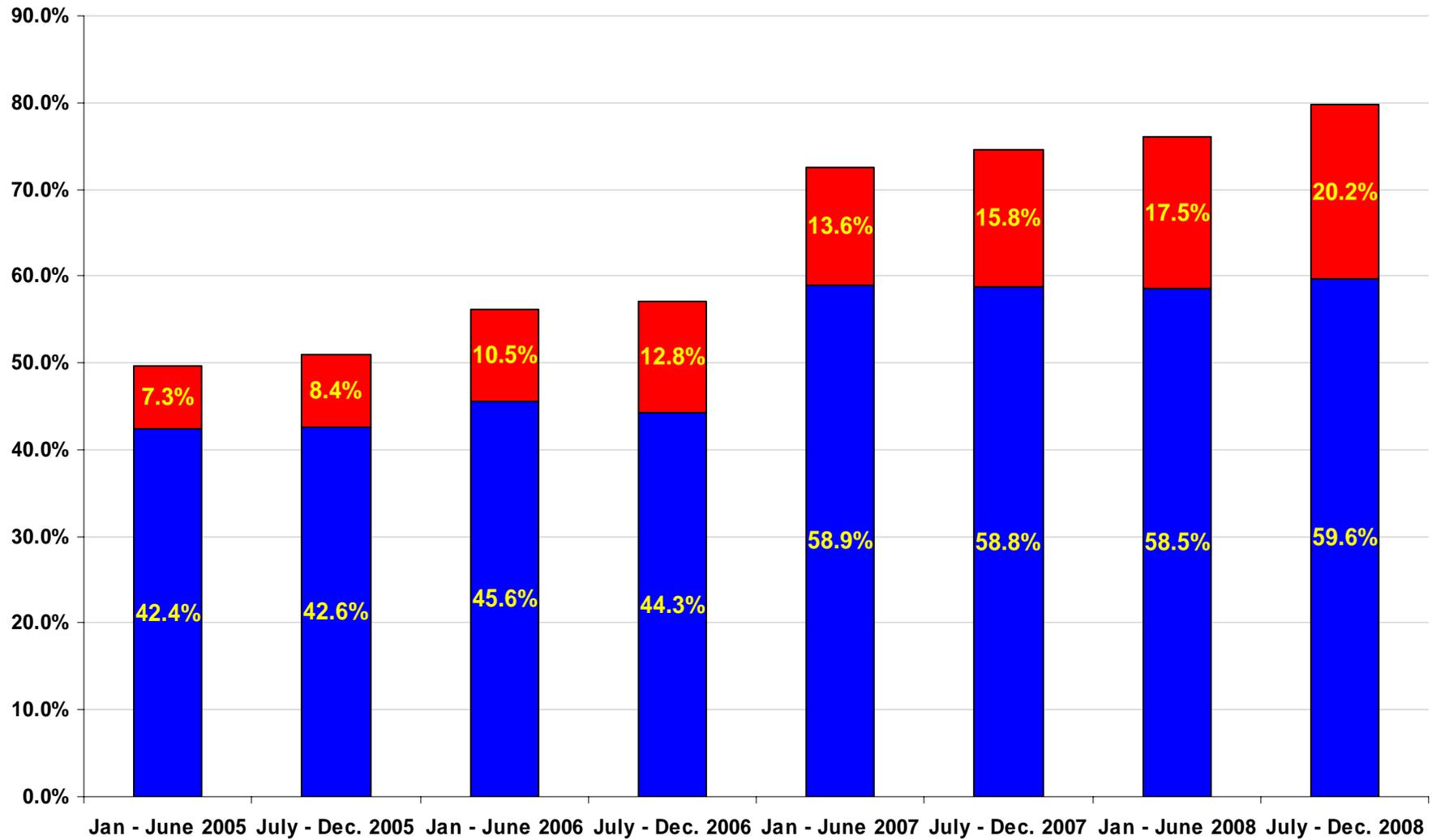
Minutes and Messages as a Measure of Wireless Usage



Source: CTIA

■ MOUs ■ Text Messages ■ MMS Messages

79.8% of All Households Use Wireless



■ Landline Households with a Wireless Phone

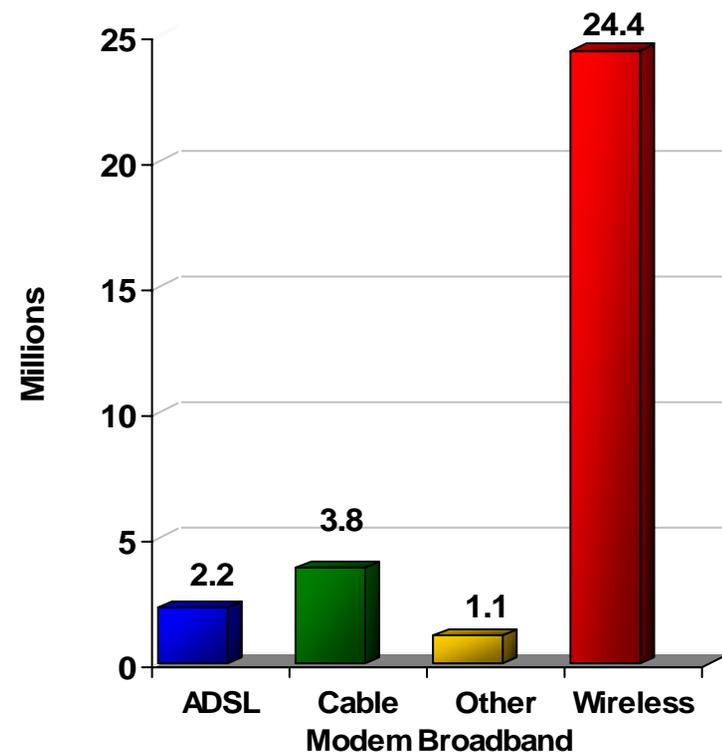
■ Wireless-Only Households

Source: NCHS "Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July – Dec. 2008"

Wireless is a Growing Means of High-Speed Access

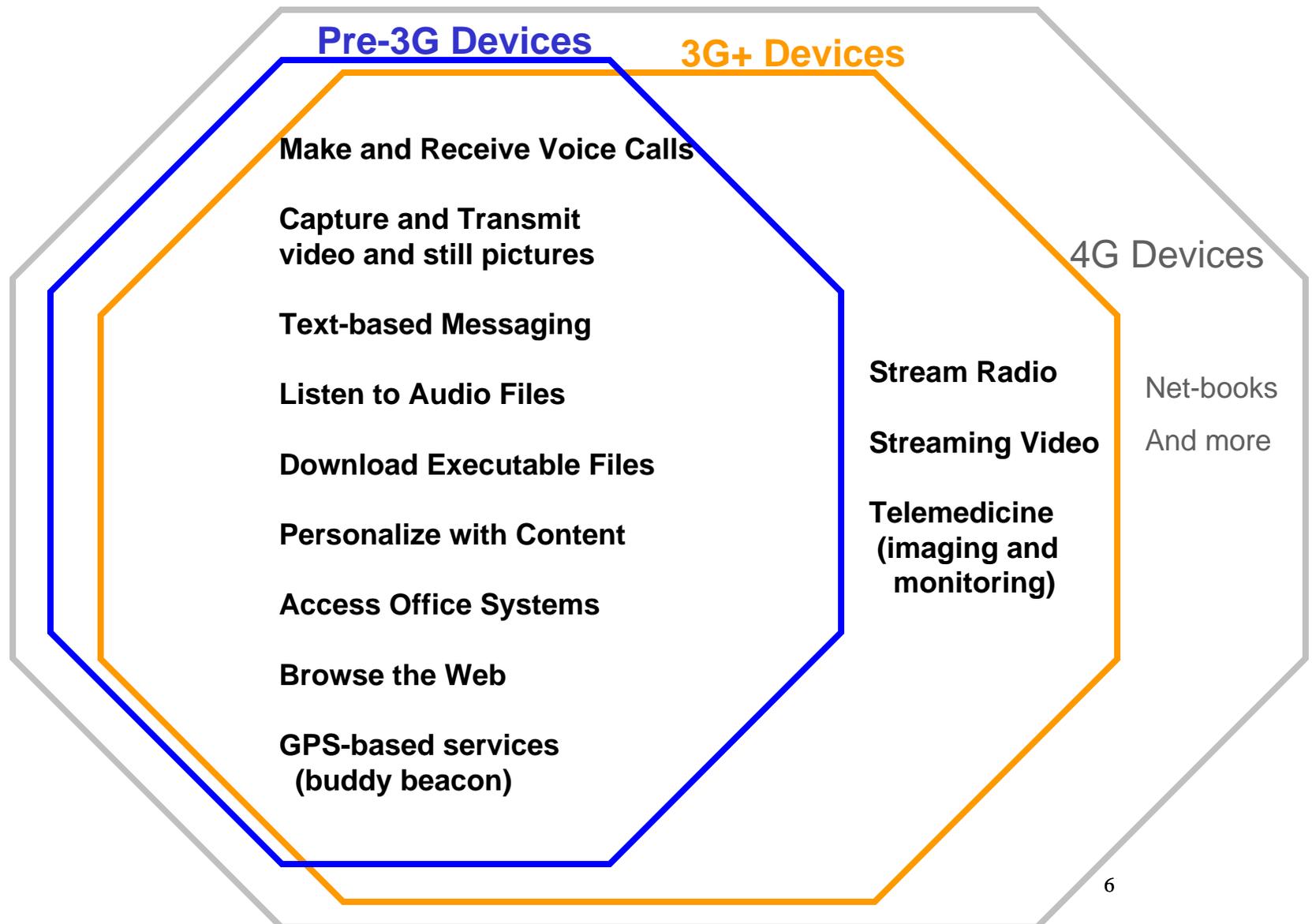
- **From June 2007 to June 2008**, total high-speed lines grew more than 31%, from 101 million to 132.8 million lines, and **77% of all adds were mobile wireless subscriptions**.
- Mobile wireless' high-speed subscribership rose from 35.3 million to 59.7 million subscribers.
- Mobile wireless' share of total broadband lines rose from 35% to 45% of total broadband lines.
 - Other forms of broadband access also grew, but not by as much as wireless access, and their total share of broadband lines fell.
 - Since then, high-speed wireless access has kept growing.

High Speed Net Adds by Type, June 2007 – June 2008



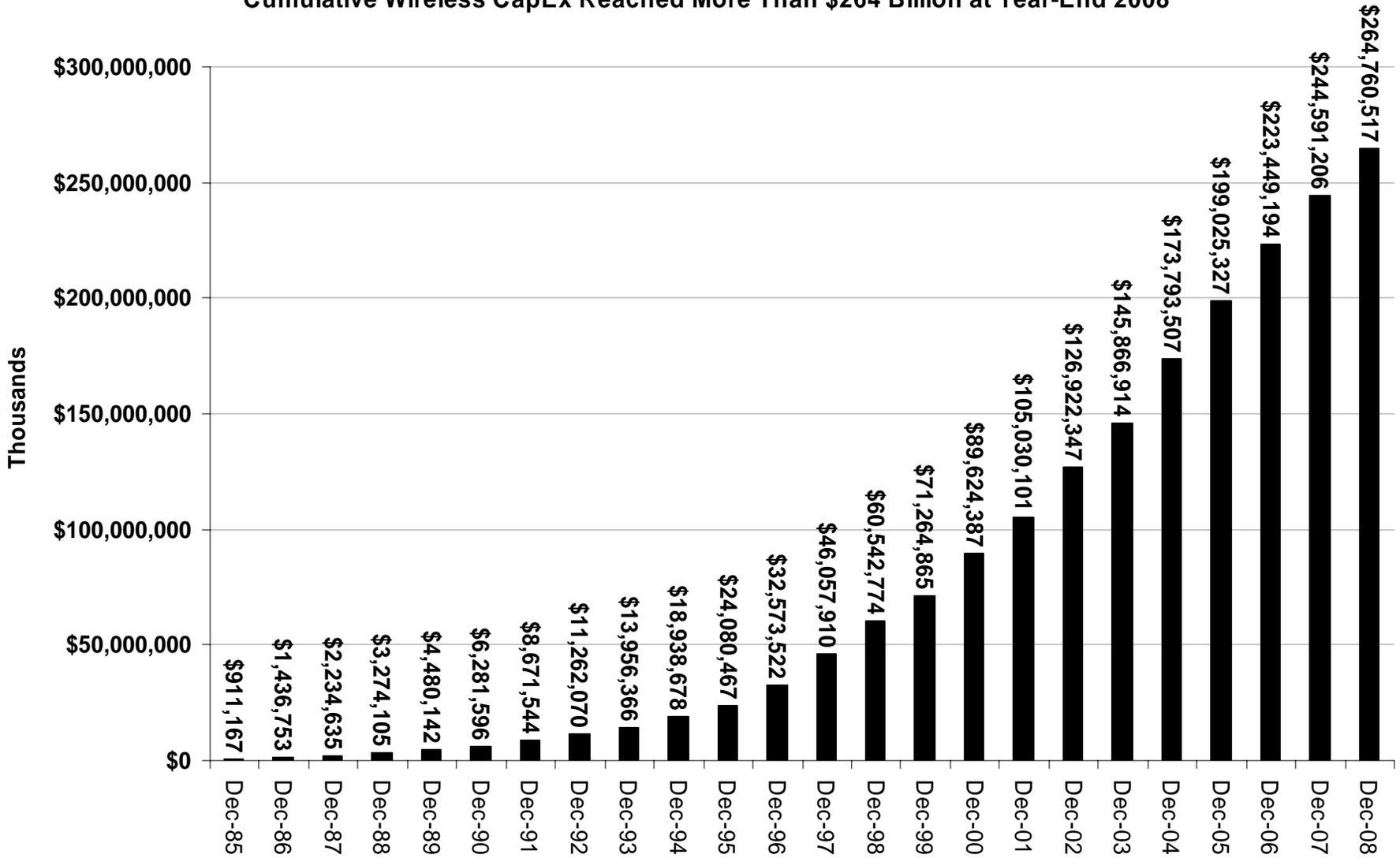
Source: FCC Report, "High-Speed Services for Internet Access: Status as of June 30, 2008," July 2009.

Applications Available via Mobile Networks and Devices



Investing Billions Annually

Cumulative Wireless CapEx Reached More Than \$264 Billion at Year-End 2008



Source: CTIA Semi-Annual Wireless Survey

Business Continuity & Disaster Recovery / Pandemic Planning

- CTIA Business Continuity and Disaster Recovery Program
 - Includes all aspects of risk assessment, planning, training and public communications, from establishing an emergency operations center to coordinating company-wide responses, to training employees on implementing disaster recovery plans and communicating status updates and instructions to the public.
- Pandemics present unique issues that differ from carriers' responses to a natural disaster.
 - Floods, hurricanes and other natural disasters present issues of infrastructure maintenance, while the spread of pandemic disease affects network congestion.
 - Focusing on pandemic preparation, wireless carriers already have the tools in place to allow them to respond in the event of network congestion.
 - While wireless providers can manage the changes in network load that a pandemic could bring, education of consumers and businesses on the need to use network resources responsibly is equally important.

Wireless Emergency Alerts

- Oct. 2007: Commercial Mobile Service Alerts Advisory Committee Recommendations delivered.
- Late 2007 – Early 2008: Industry begins evaluating and developing alerting specifications.
- April, July & August 2008: FCC Report & Orders released.
- Sept. 2008: Carriers elect to participate
 - 9 of the 10 largest carriers + dozens of smaller carriers = 97% of the population with a CMAS-capable phone will be able to receive CMAS Alerts
- Today: Industry is close to completing standards work for the elements within its control:
 - Service Provider Gateway
 - Infrastructure and Mobile Devices
- FEMA – Awaiting technical specification from FEMA for CMAS Gateway.

Handset – Network Evolution

- The critical role of the wireless handset as a part of the wireless network remains steadfast.
- Wireless carriers' enhancements to and integration of the network and the handset continuously push the envelope of innovation despite spectrum constraints.
 - For example, assisted global positioning systems (“AGPS”) show how network intelligence enables new features and improves others.
- Innovation in handsets, services, and applications is only available because careful management of the networks and applications and rigorous handset certification processes.
 - Carriers manage their networks to the benefit of consumers, *e.g.*, prioritizing 911 calls over standard calls and placing wireless priority service (“WPS”) calls in the queue over other calls and data sessions. CTIA believes that each of these examples is in the public interest.
 - To date, security breaches caused by malware downloaded onto mobile devices and external attacks through localized wireless capabilities like WiFi and Bluetooth have been minimized, but exposure is increasing. Network and device security need to be aggressively and actively managed.

Current and Future RF Interference Issues

- Jammers –
 - The problem of the use of wireless devices in prisons must be solved. The industry, however, is concerned about using jammers to address the problem.
 - Jammers transmit on the same frequencies as mobile wireless devices, disrupting communication between the device and corresponding base station.
 - Operation of unauthorized jammers would severely undermine critical public safety initiatives – E-911, priority access services, emergency alerts, etc.
 - A variety of legal alternatives to the use of illegal jammers exist to prevent cellphone use in prisons.

- Repeaters –
 - The reliability of wireless communication – both commercial and adjacent public safety communication – is being undermined by the marketing and use of unauthorized repeaters.

- 700 MHz Wireless Microphones
 - Wireless providers are eager to roll out next-generation wireless broadband services. Public Safety, moreover, has already begun deploying systems in its narrowband spectrum.
 - Absent prompt and decisive action to clear wireless microphones from the 700 MHz band, interference and communications disruption is inevitable.