



# Insights Into the SMS Industry and Market Trends




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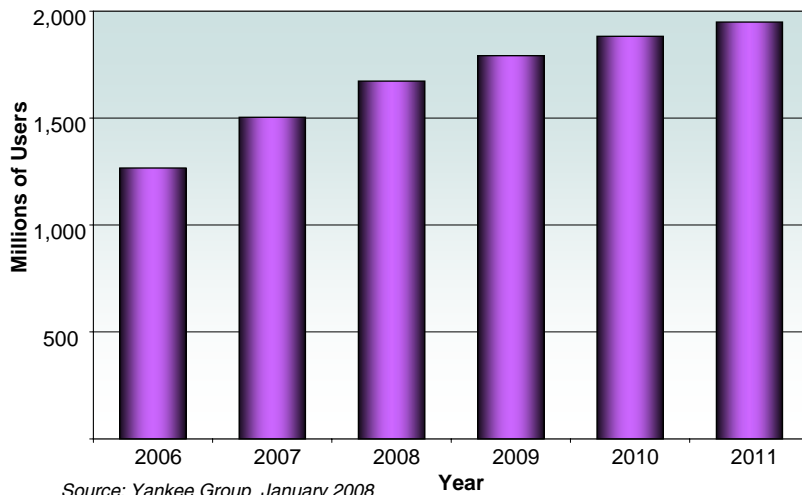
## Wireless Messaging Offerings

- SMS – Short Message Service
- MMS – Multimedia Message Service
  - Long Text Message
  - Audio
  - Picture
  - Video
- IM – Instant Messaging
- Mobile E-Mail



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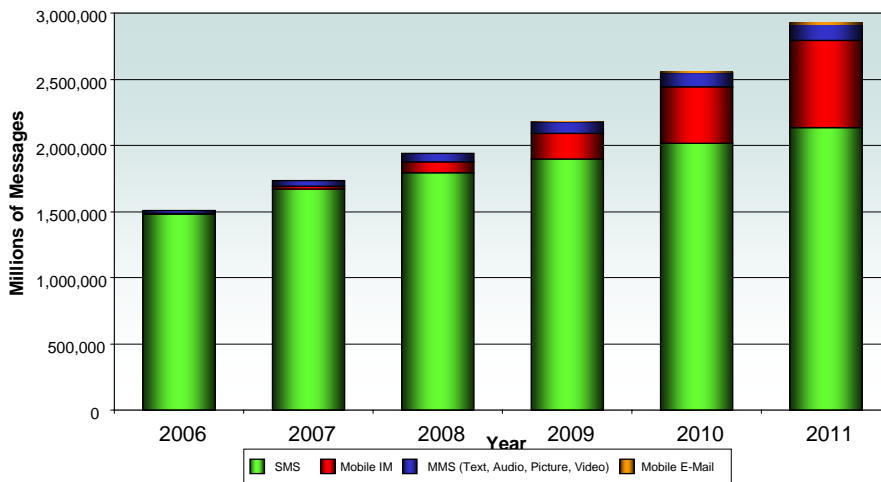
## Global Active Messaging Users



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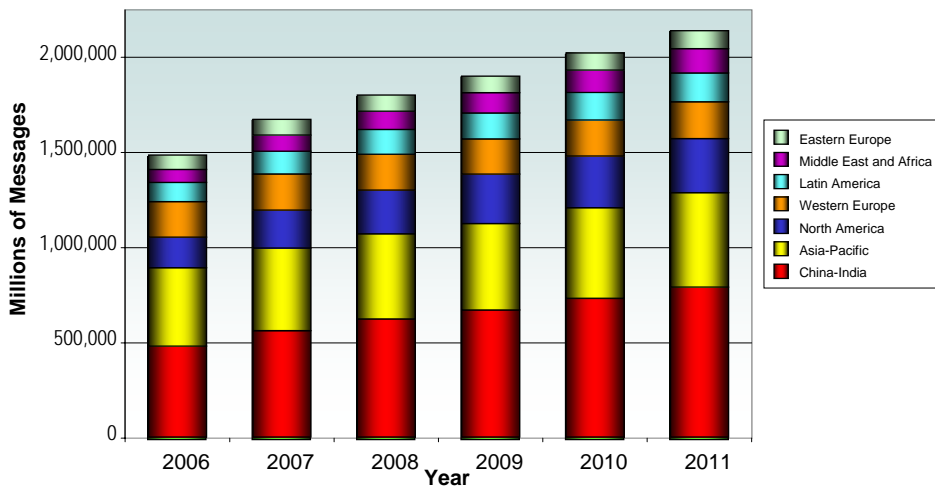
## Wireless Message Volume Projections



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## SMS Traffic Volume



Source: Ovum, John Delaney, August 2007



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## SMS – Short Message Service

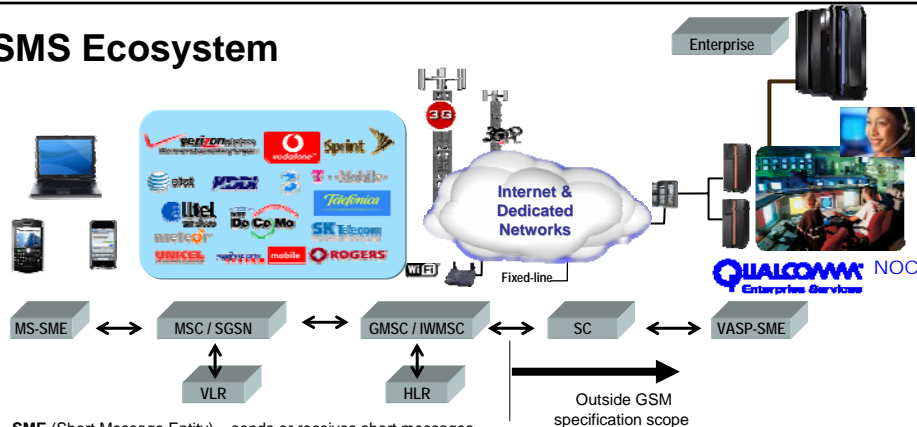
- 1991 introduced in Europe as a text messaging service based on European Telecommunications Standards Institute (ETSI) mobile network standards
- SMS supports the sending and receiving of text, images, animation and sound originated and received by Short Messaging Entities (SME). Examples of SMEs include:
  - Mobile phones
  - Servers
  - Personal computers
- Supported on the major mobile network technologies:
  - GSM (Global System for Mobile communications)
  - GPRS (General Packet Radio Service)
  - CDMA (Code Division Multiple Access)
    - ✓ UMTS-HSPA (WCDMA)
    - ✓ cdma2000 1X EV-DO



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# SMS Ecosystem



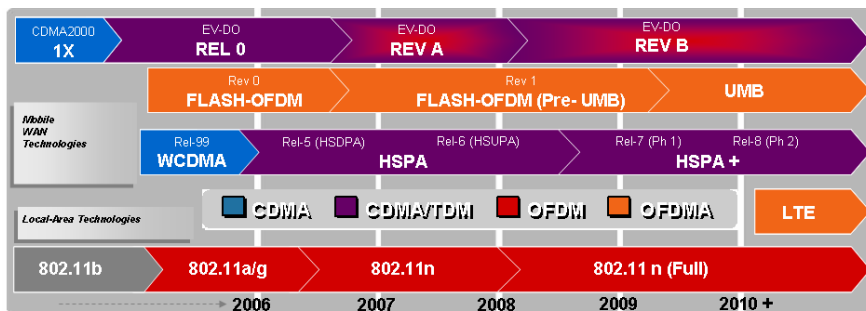
- **SME** (Short Message Entity) – sends or receives short messages
  - **MS** (Mobile Station) – a device on the mobile network capable of receiving and sending short messages
  - **VASP** (Value Add Service Provider) – an entity providing SMS-based services outside the mobile operator networks
- **SC** (Short Message Service Centre) – stores-and-forwards messages between the SME and the MS
- **MSC** (Mobile Service Centre) – performs switching functions for mobile stations in a geographical area
  - **VLR** (Visitor Location Register) - database residing on MSC containing temporary information about roaming subscribers.
- **HLR** (Home Location Register) - a database used for permanent storage and management of user/subscriber profiles
- **SGSN** (Serving GPRS Support Node) – performs packet switching functions for mobile stations in a geography for GPRS
- **GMSC** (Gateway Mobile Switching Center) - receives messages from the SC, interrogates the HLR for routing information and forward the messages to the MSC or SGSN
- **IW MSC** (Inter-Working MSC) - receives messages from the MSC/SGSN and forwards to the SC



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# Wireless Technology Moving Forward



- **Performance of Network and Devices continues to advance:**
  - Throughput
  - Range
  - Mixed-Network Support
- **Costs following performance into the Microcosm**
- **Architect your mobile solution for application needs, not technology limitations**



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# Thank You!



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## Qualcomm Incorporated

- Global leader in developing and delivering innovative digital wireless communications solutions based on CDMA and other advanced technologies.
- Partners with wireless operators, device manufacturers, independent software vendors, distribution suppliers and Fortune 1,000-class corporations to drive adoption of mobility solutions based on 3G CDMA and other digital technologies.

INNOVATION – EXECUTION – PARTNERSHIP



- Founded in 1985
- FORTUNE 500 Company
- NASDAQ Symbol: QCOM
- ~6,500 U.S. patents and patent applications of CDMA and related technologies including WCDMA
- Member of the S&P 500 Index
- "100 Best Managed Companies" — Industry Week
- "100 Best Companies to Work for in America" — FORTUNE



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