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TELECOMMUNICATION DEVELOPMENT BUREAU

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TITLE: Mobile network indicators

Mobile network indicators

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Agenda

- Aims and achievements
- What indicators we cover
- The state of the industry's data
- Our approach to definitions
- Definitions issues
  - Connections
  - Investment
- Recommendations

Aims / achievements

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- Set up to become THE source of cellular data metrics
- Major goals
  - Improve the accuracy of data
  - Broaden the scope of data
  - Improve the ease of use
  - Build the Wireless Intelligence brand
  - Build the business

- Launched Feb 2005
- Fully funded and profitable within 12 months
- Live database – updated and recalculated daily
- We now have
  - The most data - 1.5m data points
  - The most clients - majority of GSM operators + vendors + other
  - The best accuracy – operator feedback
  - High praise for ease of use
    - Good UI
    - Automatic Intranet / white label data feed service
  - Developing brand recognition – e.g. 2.5 billion cellular users

What we cover

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Connections

- Connections: by network
- Market share
- Market penetration
- Growth rate
- % by technology
- % contract / prepaid
- Net additions
- Gross additions
- Disconnections

Operations

- Churn: total, prepaid, contract
- Minutes of use: total, per user
- Effective price per minute
- ARPU: blended, prepaid, contract, voice, non-voice
- Subscriber acquisition costs
- SMS traffic: total, per user

Financial

- Revenue: total, recurring / non, voice / non-voice
- Data services as % of revenue
- Operating expenditure
- Opex : sales ratio
- Capital expenditure
- Capex : sales ratio
- Operating free cash flow
- EBITDA + margin

What we cover

- Our data runs from 2000 to now
- We cover all operators worldwide and all technologies
- We provide 5 year forecasts for
  - Connections
  - Metrics derived from connections
    - e.g. market penetration
- Most of our data comes from operators' financial reports
- Other areas are:
  - Estimated
    - e.g. technology split across networks
  - Calculated
    - e.g. disconnections
- We get a lot of feedback from operators on our estimates
  - Even where they do not report the number
- We provide analytical reports every 2 weeks on key aspects of the data

3G definitions

- "3G" is still a difficult term
  - In spite of the official definitions
- It's now accepted that 3G includes
  - cdma20001X, EV-DO
  - EDGE
  - W-CDMA, HSDPA
- WI uses names of individual technologies instead of "3G"

- Biggest issue – no data
- 2nd biggest – no definition
- 3rd biggest – inconsistent definitions
  - Registered or active users?
  - Definition of "active users"?
  - What is "commercially launched"?
  - MVNO connections included?
  - What is the linkage between connections and people?
  - How to define the territory, e.g. "France"

3G trends

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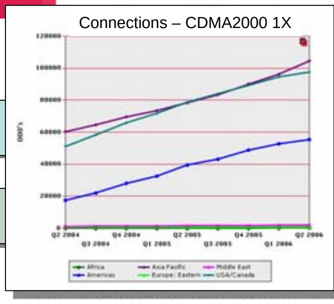
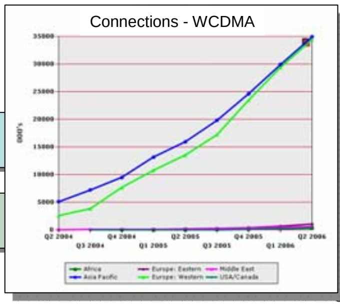
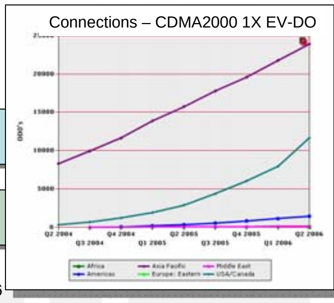
Connections – EDGE

(Not available)

	EDGE	CDMA2000 1X
Connections	??m	261m
Networks	140	75







	WCDMA	CDMA2000 1X EV-DO
Connections	72m	37m
Networks	122	29

WI approach to definitions

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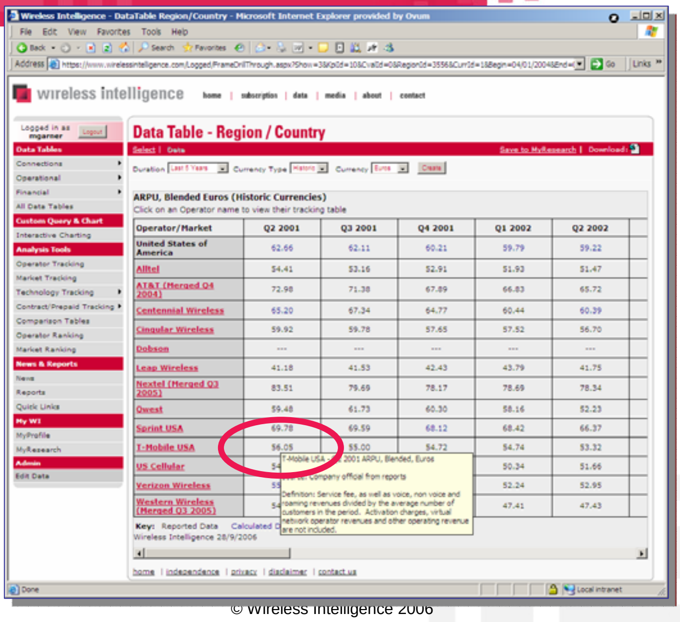
- We are not in a position to set definitions
  - We use what the operators provide
- We have a definition for each data point
  - Definitions do change during a time series
- We colour code our data to show our confidence in it
  - Based on the source and definition
  - In future we plan to "promote" data that conforms to a de facto standard definition by showing that data in bold
    - E.g. Active users
      – paid activity within the last 3 months

De facto	**2,5**
Reported	2,5
Estimated	2,5
Forecast	2,5

Example presentation



ARPU, Blended Euros (Historic Currencies)

Click on an Operator name to view their tracking table

Operator/Market	Q2 2001	Q3 2001	Q4 2001	Q1 2002	Q2 2002
United States of America	62.66	62.11	60.21	59.79	59.22
Alltel	54.41	53.16	52.91	51.93	51.47
AT&T (Merged Q4 2004)	72.98	71.38	67.89	66.83	65.72
Centennial Wireless	65.20	67.34	64.77	60.44	60.39
Cingular Wireless	59.92	59.78	57.65	57.52	56.70
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Leap Wireless	41.18	41.53	42.43	43.79	41.75
Nextel (Merged Q3 2005)	83.51	79.69	78.17	78.69	78.34
Qwest	59.48	61.73	60.30	58.16	52.23
Sprint USA	69.78	69.59	68.12	68.42	66.37
T-Mobile USA	56.05	55.00	54.72	54.74	53.32
US Cellular	[illegible]	[illegible]	[illegible]	50.34	51.66
Verizon Wireless	[illegible]	[illegible]	[illegible]	52.24	52.95
Western Wireless (Merged Q3 2005)	[illegible]	[illegible]	[illegible]	47.41	47.43

Definitions issues
3G investment metrics

- Biggest issue – no number
- 2nd biggest – no definition
- 3rd biggest – inconsistent definitions

  - Does capex include licence fees?
  - How is capex broken down?
    - How much capex goes on 3G?
    - Mix of radio network, core, service layer?
  - 3G ARPU not reported separately
  - Different accounting regimes across regions
  - Currency conversion rates for operator groups who report in a non-local currency, e.g T-Mobile Czech Republic

Concluding remarks

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- Thanks to databases and the internet we can now do a good job of making useful data and analysis widely available and easy to use

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- The limiting factor is the availability and quality of data
- In some areas there is enough data to do a respectable job
- But several large investment areas are almost invisible
  - 3G
  - Advanced services

- Operators alone will not straighten these issues out
  - They need pressure
- Regulators' data is very useful for making greater sense of industry data

Recommendations

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- 3G has an important role in economic development
  - We believe that the world needs greater visibility of the scale and impact of the investment
- Regulators and trade bodies have a key role to play in improving the scope and quality of industry data
- We recommend
  - Mandate reporting of a minimum data set
  - Set standards for transparency
  - Work with the industry to harmonise definitions, where feasible
  - Set a roadmap for greater scope of data

3G data needed
Capex on the network
% Population Coverage
Connections
ARPU – voice / data
Traffic – voice / data

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Thank you