Mobile Internet Charging

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Telecom Forum
Helsinki 04 st October 2000

Presentation agenda

- Comptel background
- Mediation layer in OSS today
- Operators role in future
- Mobile internet charging
- Future outlook
- Comptel m-services platform

COMPTEL GROUP

Comptel Plc

Subsidiaries:

- Comptel Communications Sdn Bhd, Malaysia
- ComptelCommunications Inc, USA
- Comptel Communications Oy, Finland
- Probatus Oy, Finland
  - Business Tools Oy

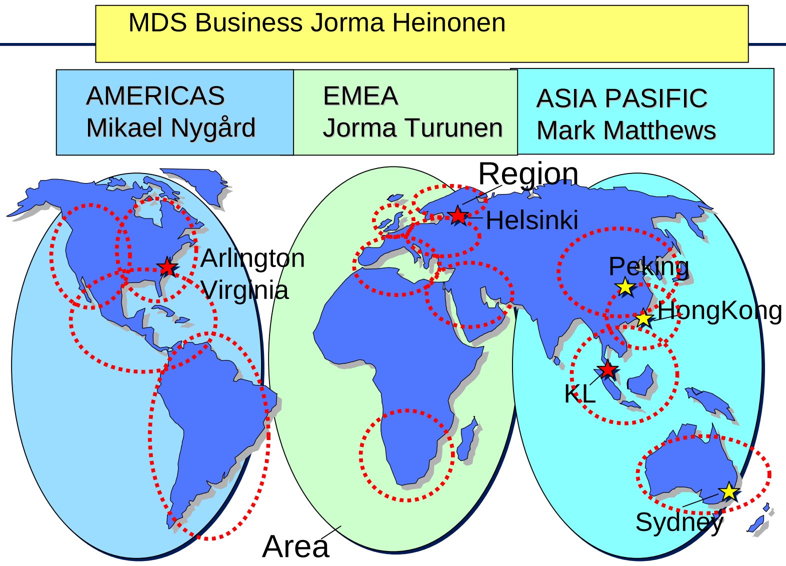
Associated Company:

- Arcus Software Oy, Finland

Representative Offices:

- Comptel Plc RO, Hong Kong
- Comptel Communications RO, Australia

Comptel AREA Organisation



Global Partner Network

System-integrators

- Andersen Consulting
- CSC
- Cap Gemini
- Compaq
- debis Systemhaus
- EDS
- Hewlett-Packard
- IBM
- Logica
- Lucent

Equipment vendors

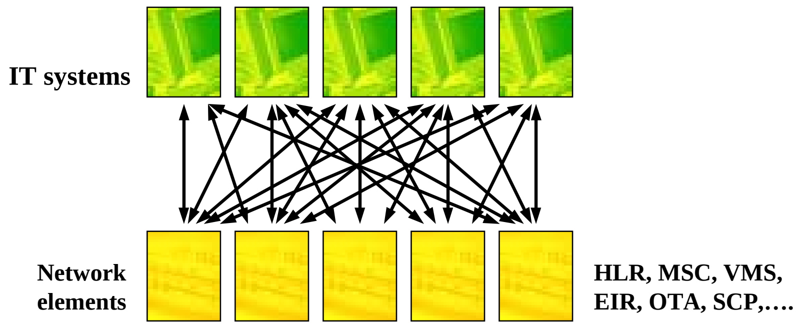
- Compaq
- Hewlett-Packard
- IBM
- Sun
- Nokia (OEM)

Software vendors

- Amdocs
- Geneva
- Hewlett-Packard
- IBM
- INTEC
- KSCL
- Kenan
- LHS
- Logica
- More Magic Software
- Oracle
- Portal
- TCS

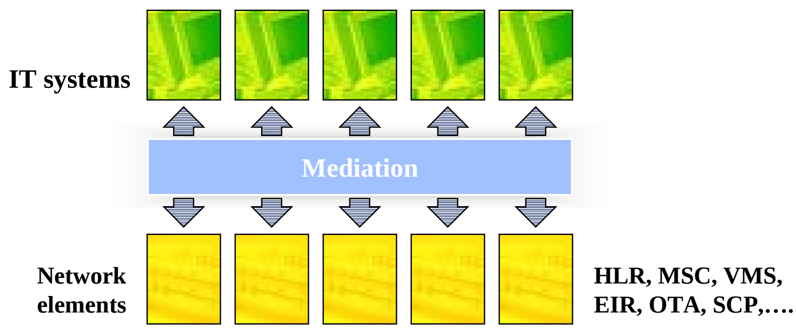
Over 160 MDS Customers in 47 Countries

World Before Mediation



Alcatel, Aldiscon, Cisco, Comverse, Ericsson, Lucent, Nokia, Nortel, Sema, Siemens ...

Life is Easier with Mediation



Alcatel, Aldiscon, Cisco, Comverse, Ericsson, Lucent, Nokia, Nortel, Sema, Siemens ...

Mediation software

IT systems

- Billing
- Customer care
- Fraud management

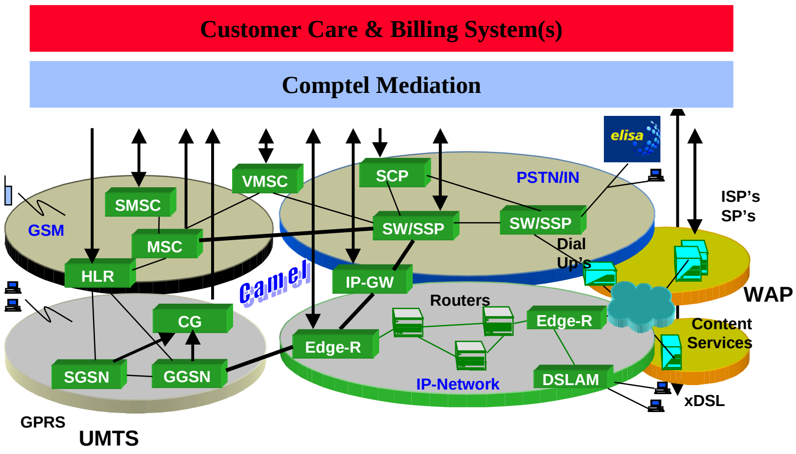
- Customer behaviour analysis
- Quality management systems

Service provisioning

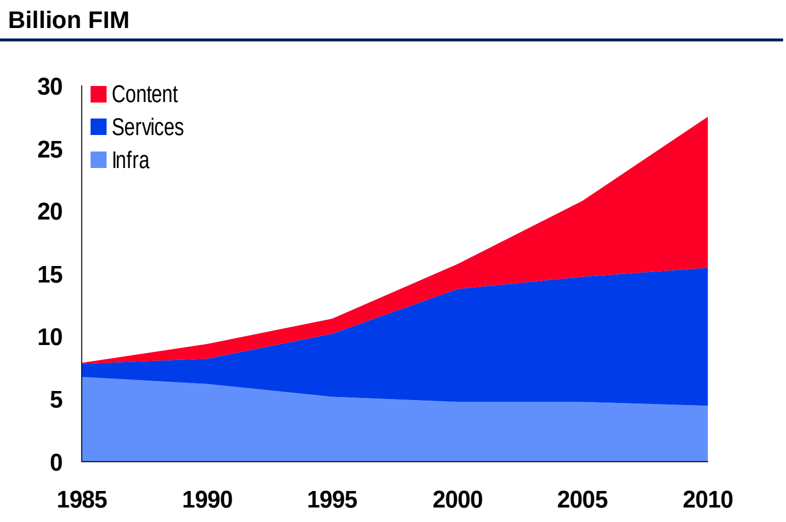
Usage collection

Network elements

Future Challenges…more complexity..more players

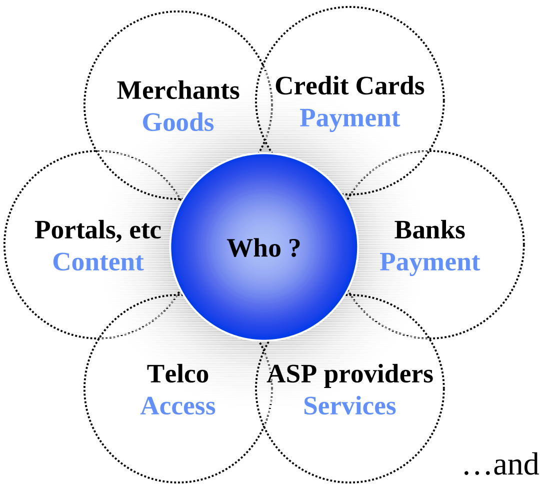


Telecom Services in Finland



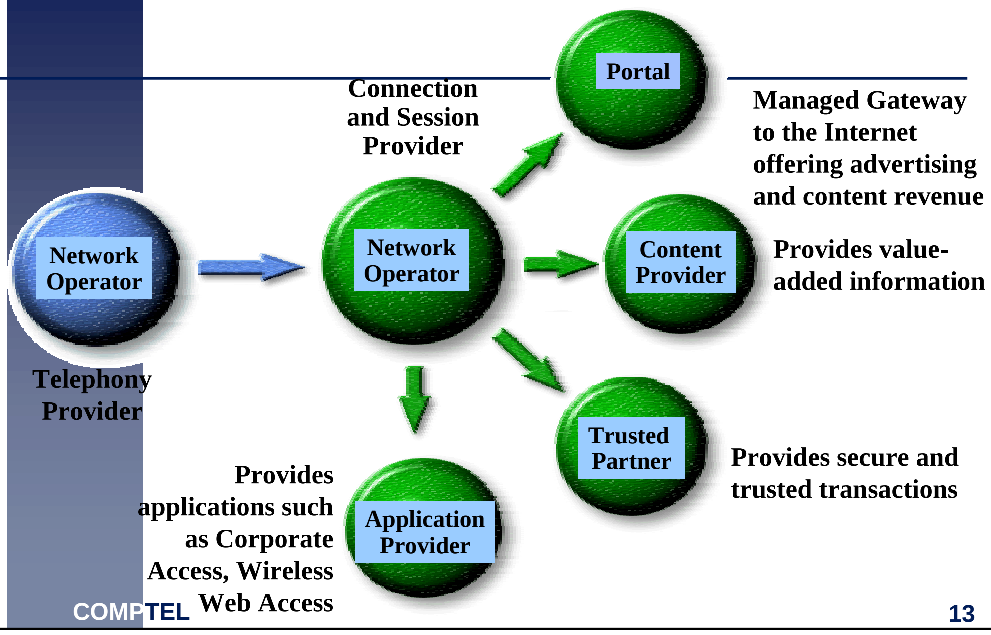
Source: Professor Olli Martikainen

Future Players?



…and others?

Many new roles for the Operator



Telco Positioning Options

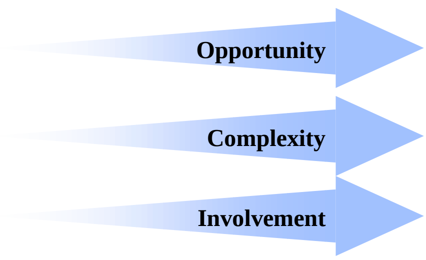
Access provider

Phone-bill based Micro-payment platform

Portal Service Provider

Service Portal

Content provider



Impact on Business

- Services & Content is a business opportunity
- Access - Commodity product brings less margins
- Mobility is a must

Mobile Evolution

- 59% of GSM operators will launch WAP before 8/2000
- 67% of GSM operators will launch GPRS before 2/2001
- 3G/UMTS services will be launched mid 2002
- Data will exceed voice in mobile in 2.5 years
- Mobile e-commerce will be primary revenue generator in 3 years

Source: ADC Group, February 2000

COMPTEL

Charging is Changing

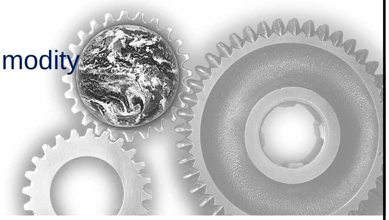
Duration
- "Always on", no point charging

Distance
- Replace with Bandwidth, Quality of Service

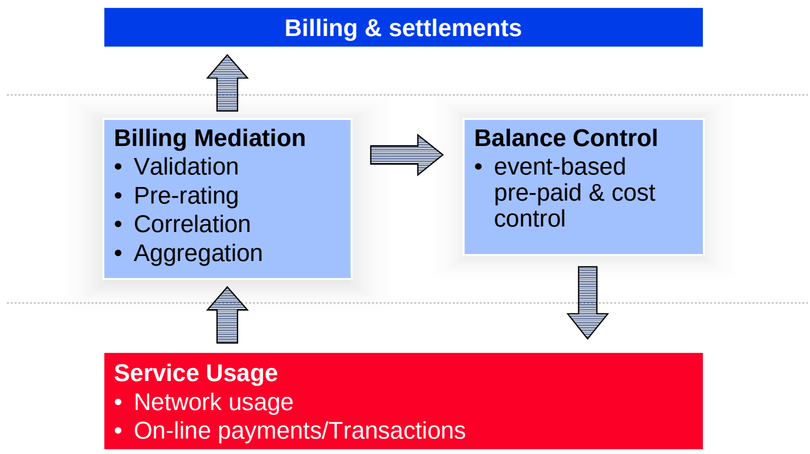
Time of the Day
- Replace with "How real time information"

Mobility
- Added value, but becoming a commodity

Information/Content
- The real value



Intelligent Mediation is Essential



New Mobile Internet Services: Main Impacts on Mediation Layers

- 20-100 times more events, extremely long 'calls'!
  ==> *high performance and aggregation are required*
- Charging no longer based on duration!
  ==> *volume & content & location based charging*
  ==> *need for new thinking in Mediation & Billing*
- More players in the value chain
  ==> *more formats and new interfaces*
- Everything in real time
  ==> *high performance, high availability and auditability*

Usage Information and Mediation for Mobile Internet Charging

Mediation software needed

Charging type	usage collection	aggregation	correlation
Flat fee	√	√	
Monthly package	√	√	
Monthly package +add. usage data	√	√	
Network usage	√	√	√
Charging for content	√	√	√
Revenue sharing	√	√	√
Roaming	√	√	√

Example: GPRS on Phone Bill

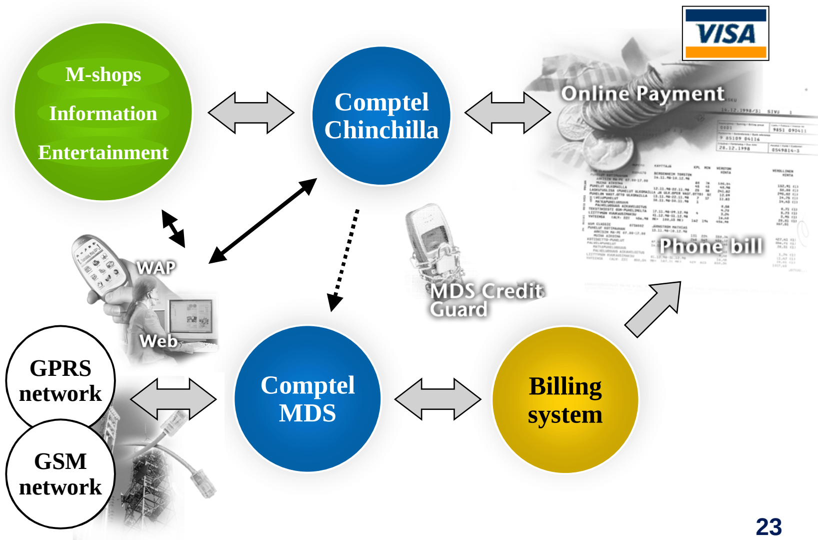
Mrs. Smith
Subscription GSM & GPRS

	MB/ #	Unit Min	Price	SUM
Voice calls - National				
Peak 9-17	8	10	0,35	3,50
Off-Peak	20	55	0,20	11,00
Short Messages	17		0,15	2,55
GPRS Data				
Peak 9-17		48	0,04	1,92
Off-Peak		138	0,02	2,76
Horoscope	9		0,50	4,50
Stock Info	1		9,99	9,99
			TOTAL	36,22

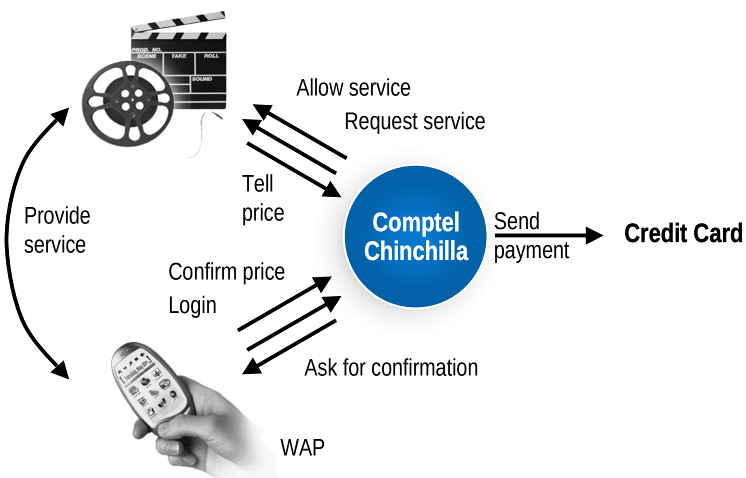
Comptel's Position in Mobile Internet Market

- R&D's focus on Mobile Internet since 1998. First GPRS/IP customers in 1999
- Several significant MDS for GPRS/IP delivery agreements (BT Cellnet, Sonera, Radiolinja, Radio Mobil)
- GPRS Charging Gateway products delivered since Q1/00
- Comptel Chinchilla, Online mediator, was launched in Q3/2000

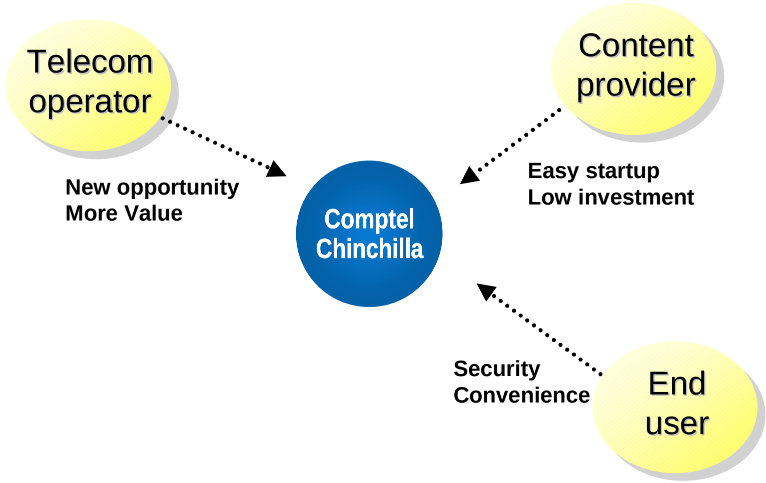
From Traditional Mediation to Online Mediation



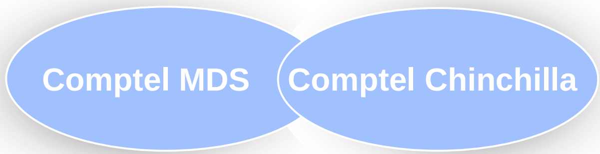
Example 1: Online Payment



Benefits of Comptel Chinchilla

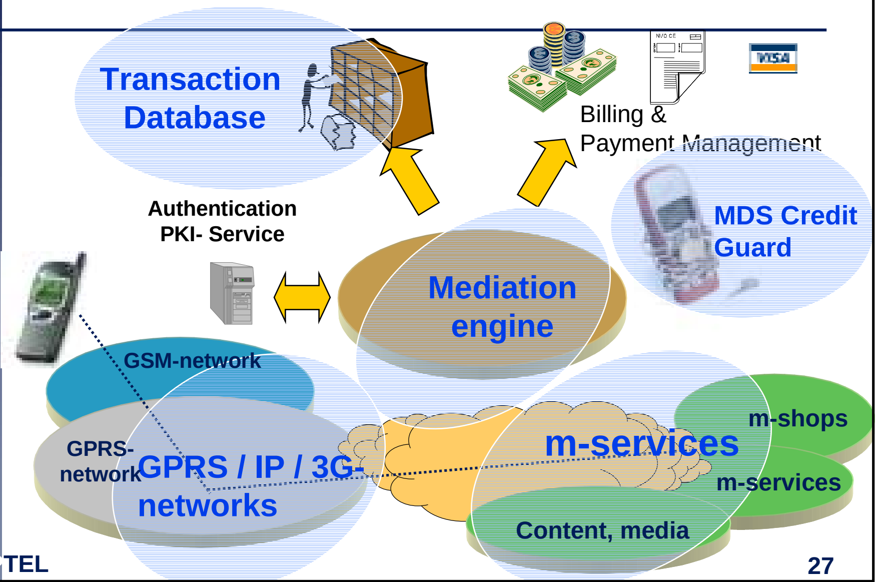


Take the Next Step in Value Chain

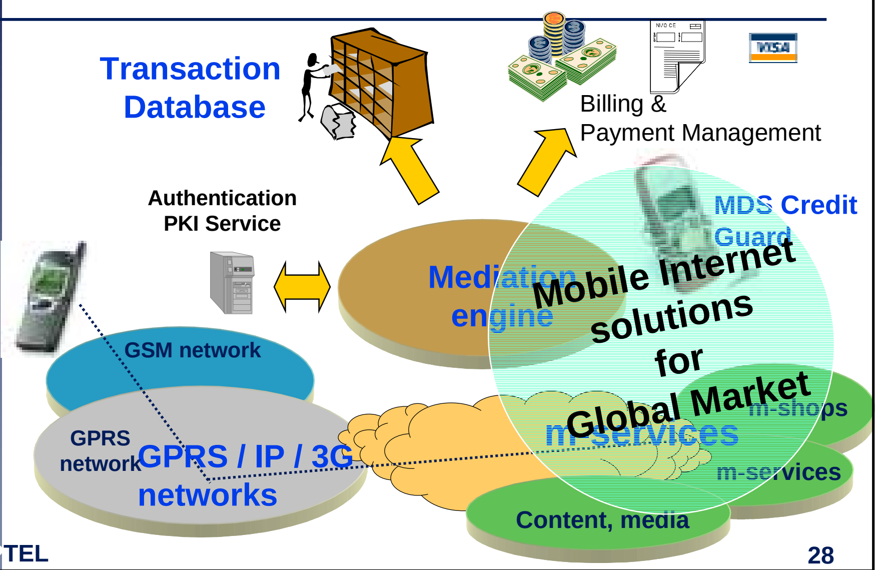


From Traditional Mediation to Online Mediation

Comptel m-services Platform



Establishment of a Sales Company



Comptel future outlook

- The growth is expected to continue on the mediation software market, due to the changes in the role of mediation software and in technology (GPRS, IP)
- The roll-out of the GPRS technology and services are playing an important role in the growth strategy.
- There are uncertainties related to 3G mobile networks
- "Time to market" is increasingly important
- Comptel's growth target for the year 2000 revenue is 40-50%
- EBITDA margin target for the fiscal year 2000 has been raised from 30% to 35-40% - which is on the top in the industry

Comptel Today; Providing the future telecom software solutions

Global Telecom software company

Global partners as delivery channel

High profitability

Good references

Strong growth

R&D investments for next generation mobile

Contact information

Contact information

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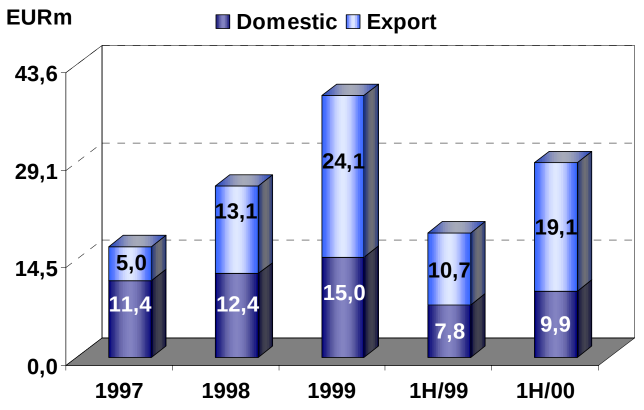
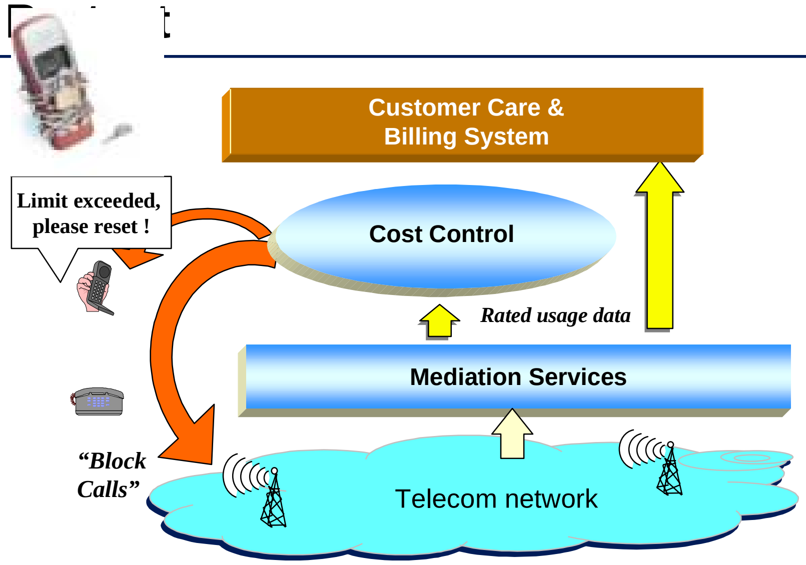
Support Slides

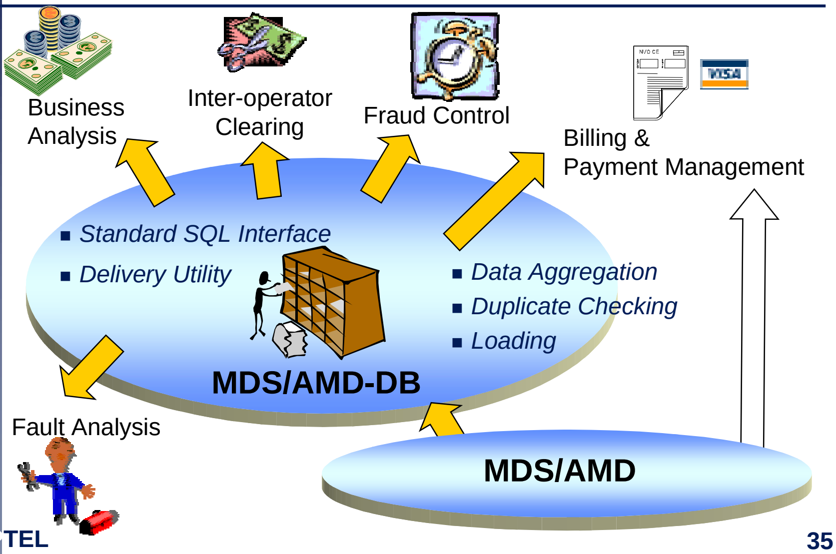
Comptel Net Sales 1-6/2000



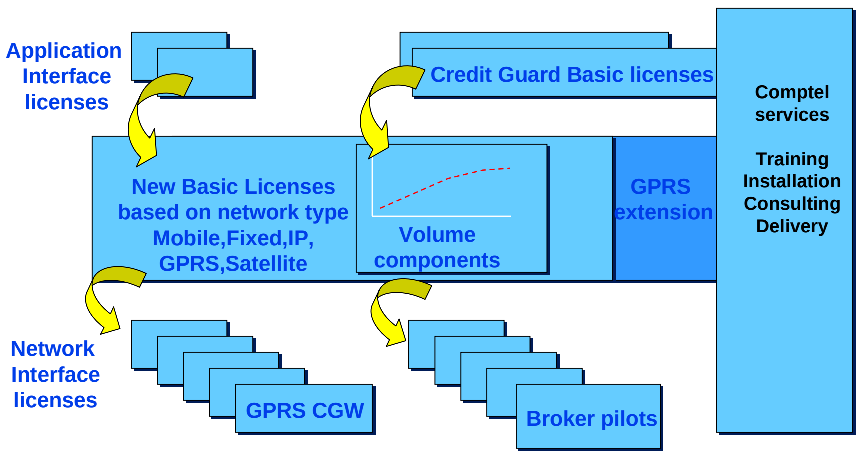
MDS Credit Guard - To Serve and To



Long Term Information for Several Purposes



MDS Pricing Models



Competitors

	Billing mediation	Service Provisioning	GPRS Mediation	
COMPTEL	√	√	√	Global, independent
ACE*COMM (USA)	√			Mainly USA
Architel (CND)		√		(Nortel acquisition) Global
EHPT (S)	√	√	√	Ericsson 60%
ICL (UK)	√			Europe, Asia Pacific
MSI (UK)	√	√		(Marconi proposal) Mainly USA
Tertio (UK)	√	√	√	Mainly Europe