

INTUG

ENG, Amsterdam 19 March 2001

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What the global enterprise requires

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INTUG contents

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- needs and markets
- regulatory context
- killer
 - information
 - applications
 - services
 - technology
 - suppliers
- competition and choice?

INTUG needs

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- seamless global interoperability
- integrated web technology end-to-end
- unbundled provision of best-of-breed value added services

INTUG market

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- separate competitive choice of:
 - network operators
 - service providers
- flexibility to change suppliers
- open interfaces to:
 - applications
 - information
 - services
 - exchanges

INTUG regulatory context

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- market deficiencies
- auctions & beauty contests
- roaming & fixed termination
- mergers & take-overs
- new legislative package
- competition law inquiries

INTUG market deficiencies

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- high mobile-to-fixed termination rates
- high roaming rates
- national oligopolies turning into a global oligopoly
- absence of global and regional services

INTUG auctions & beauty contests

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- 3G allocation has come to an ignominious end
- consolidation amongst operators
- anti-competitive behaviour?
- proposals to share infrastructure
- no underlying business model
- payback 7 ... 10 ... 15 ... 20 years?
- rival technologies?

INTUG mergers and joint ventures

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- Vodafone:
 - Mannesmann
 - J-Phone
 - Eircell
 - Eurocall Scheme
- France Telecom + Orange
- Vizzavi
- network sharing

INTUG legislative package

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- market definitions
- are markets competitive?
- who has SMP?
- what are they obliged to do?
- universal service
- location (112 and privacy)
- pricing information

INTUG roaming inquiry

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- formal DG Competition investigation
- collusive behaviour
- wide variations in prices
- increasing prices
- high levels of market power
- poor provision of information to consumers

INTUG 2.5 and 3G roaming

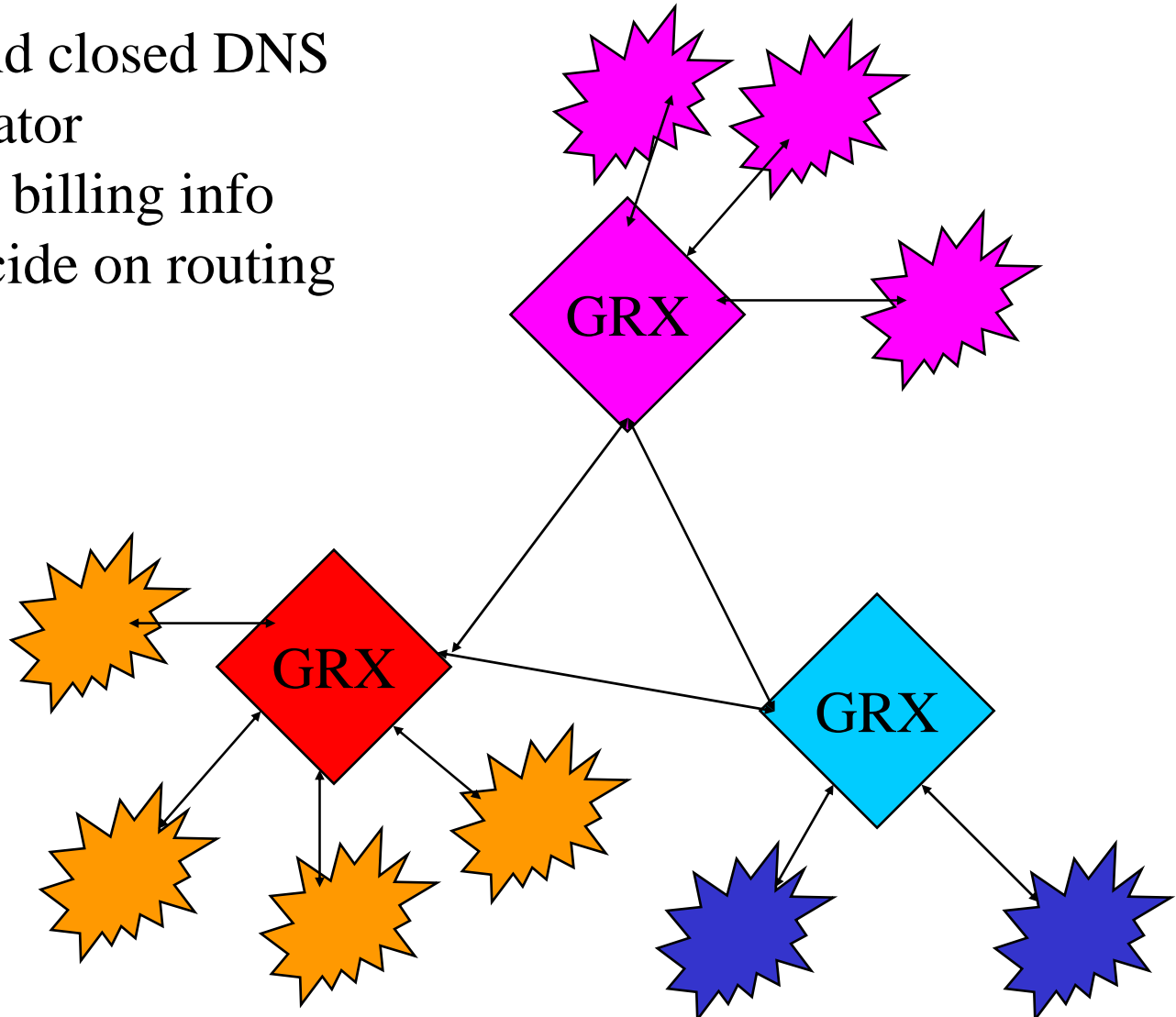
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- revolutionary change
- GPRS will be the model for UMTS
- central role for VPN providers
- “keeping” customers when abroad
- data protection and privacy issues
- competition law issues

INTUG GPRS Roaming eXchange

- separate and closed DNS
- home operator
 - gets all billing info
 - can decide on routing



INTUG MVNOs

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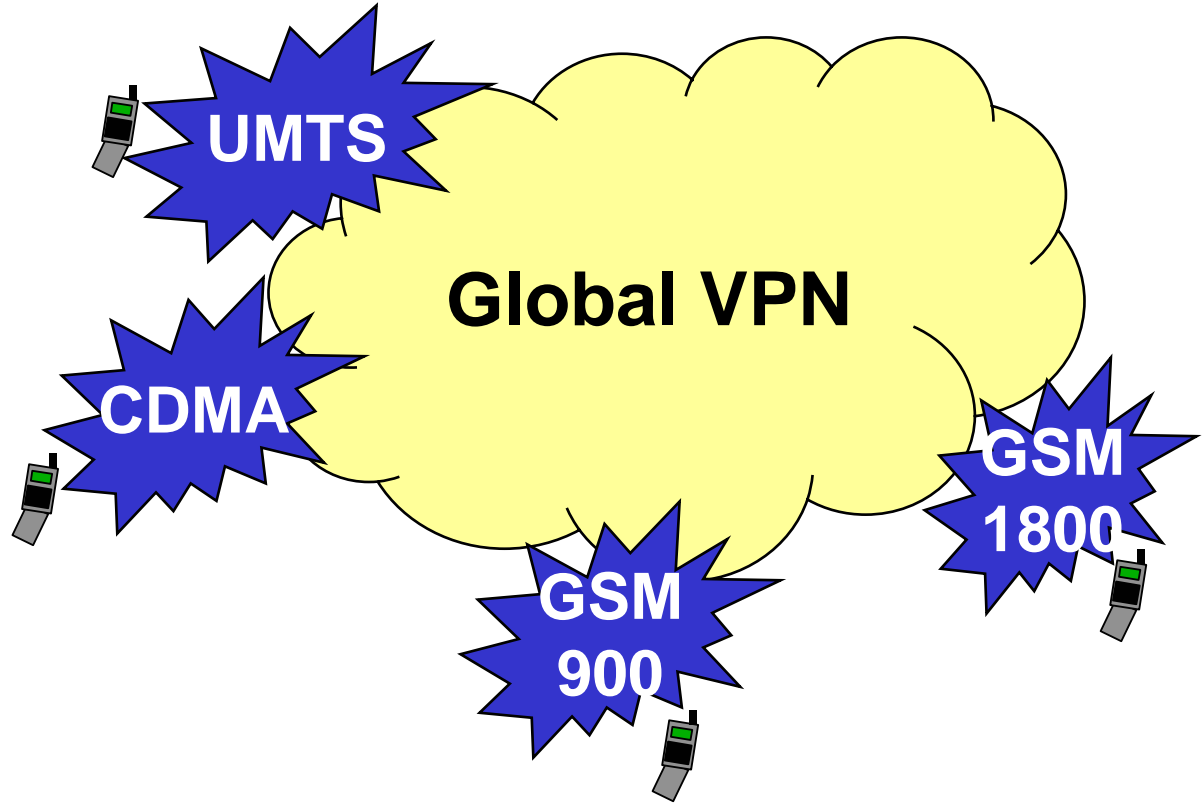
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- slow but steady progress
- NRAs shifting to open access
- will reduce high termination costs
- will cut exorbitant roaming fees
- some operators conceding MVNOs
- a lot of competition to take part
- support in European Parliament

INTUG what businesses want

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buying only transit over mobile networks

INTUG regulatory summary

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- competition law is a poor instrument to regulate a fast moving market
- regulatory cycle is longer than product/service life cycle!
- users need to be aware of GPRS and UMTS roaming
- GRX could fit with VPNs to provide viable solution

INTUG killer information

- access to relevant market data
- consolidated customer data
- interpreted supplier data
- marketing/promotional data
- a tailored information portal

more information than my competitor at the point of decision/negotiation including what I didn't know

INTUG killer applications

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- multimedia not voice
- browser-based thin client
- windows terminal functionality
- transactions on-line (legacy systems)
- advertising (streamed video/sound)
- machine to machine
- intelligent agent surfers

INTUG killer services

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- unbundled
- market prices and news
- messaging, not just SMS
- location finding
where is the nearest X
- vending machine access
- ticketing/reservations
- real-time logistic optimisation

INTUG killer technologies

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- GPRS/EDGE
- 3G UMTS
- Bluetooth
- “quin-band” global roaming
- 4G with high resolution GPS

INTUG killer suppliers

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- global reach and interconnect
- competitive in more than one layer
- access to:
 - content
 - function
 - transport
- free of GSM-dependency
- virtual and virtuous

INTUG competition and choice

- current market delivers neither
- mobile commerce needs both
- enterprises are global like the market
- licence spending is stifling growth
- interoperability will drive growth
- open application/information interfaces
- unbundled web-based services
- network operators AND service providers