



**NRTRDE Beyond 1<sup>st</sup> October:  
Operating NRTRDE  
Extracting valuable data**

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# Agenda

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## About XINTEC

### NRTRDE Data is Valuable!

- Fraud Detection
- Revenue/Network Assurance
- Pricing Transparency
- ...

### Operating NRTRDE

- Interfaces
- Key Performance Indicators
- Dispute Handling

### Conclusion



# Agenda

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## About XINTEC



# About XINTEC

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Established in 2007, XINTEC provides advanced data processing software and standalone tools.

XINTEC brings together a team of industry experts with core technical development skills in the areas of inter-operator billing and rating.

XINTEC focuses its activity on the Roaming Industry, both in business processes and information systems.



# 19 days till Oct 1<sup>st</sup> 2008

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## **NRTRDE exchange is in place**

- Many operators are NRTRDE ready
- Some exchange NRTRDE productively
- The technical feasibility is proven
- Interworking between hubs is in place

## **Are these statements still going around?**

- VPMN has little incentive to implement NRTRDE
- It doesn't benefit a VPMN, and it costs them money
- VPMNs should look for cheapest NRTRDE solution and implement late



# Agenda

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**NRTRDE Data is Valuable!**



# NRTRDE Data is Valuable

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## **Fraud detection**

- Prevent roaming fraud in near real time

## **Revenue Assurance**

- Identify revenue leakage and fraud liability risks

## **Network Assurance**

- Identify and respond to network anomalies

## **Pricing Transparency**

- Transparency measures to combat "bill shock"

## **Data Retention**

- Dispute handling (min. 6 months)
- Regulatory compliance (e.g. EC directive)



# Fraud Detection

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## Get rid of HUR !

- HUR process is slow
- HUR generated from NRTRDE is a small improvement
- Limited information is present in HUR
- No profiling capabilities

## Benefit of the visibility provided by NRTRDE

- Apply fast detection processes
- Apply subscriber profiling
- Hotlisting / Blacklisting
- Velocity and collision checks



# Revenue / Network Assurance

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## Revenue Assurance

- Erroneous, missing billing records, call detail records
- Bad debt
- TAP & NRTRDE data reconciliation

## Network Assurance

- High percentage of failed calls, misdials
- Monitor traffic forecasts, steering agreements
- Traffic profiling (as VPMN and HPMN) and detect anomalies
  - Traffic increase/decrease from specific roaming partners
  - Unusual service or network node traffic
  - Changes in frequency of calls outside common times of day/week
  - Ratio of international / domestic / back home calls



# Pricing Transparency / Data Retention

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## Pricing Transparency

- High-volume users are susceptible to bill shock
- Difficult to measure prices and volumes by megabyte
- Can NRTRDE systems be used to implement pricing transparency services (e.g. notify out-bundle data usage)

## Data Retention

- operators can make claims regarding disputed NRTRDE exchange for up to 6 months following a call
- Legislation for the retention of data (as soon as possible) for the prevention, investigation, detection, and prosecution of criminal offences



# Agenda

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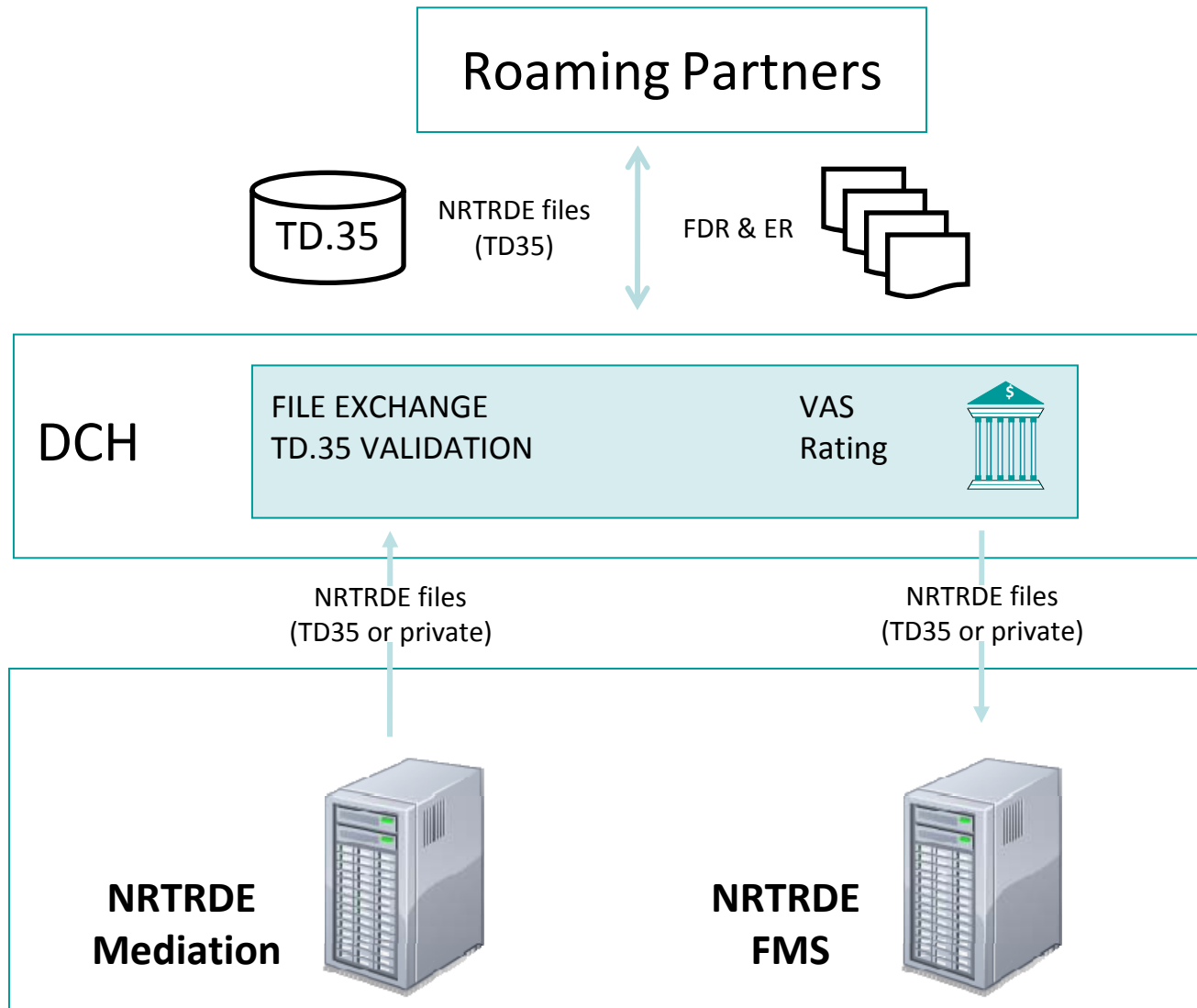
## Operating NRTRDE



# Operating NRTRDE



Monitor  
ALL  
interfaces



# KPI & processes

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## Interface network to NRTRDE mediation

- CDR age
- Input file frequency
- Missing files

## NRTRDE mediation

- Performance
- Error handling (e.g. unknown CDR format, PMN code)

## Data Clearing Houses

- Error handling and acknowledgements (private interface)
- % or number of CDR rejections
- SLA parameters
- Known and tested business continuity plan?



# Dispute Handling

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## Data retention

- Keep data for 6 months or more

## NRTRDE information

- Acknowledgement on time?
- Errors ? If yes, reported on time?
- Were delays due to DCH non SLA conformity?

## TAP information

- Were all call events reported in NRTRDE?
- Cross-check with TAP records



# Agenda

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Conclusion



# Conclusion

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## Take full advantage of near real time data

- Leverage your investment in NRTRDE with other projects
  - Monitor all roaming traffic
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Key data and  
information

### Data sources:

- NRTRDE
- GGSN CDR
- Roaming Partners HUR
- TAP files

### Key information:

- IMSI (subscriber identifier)
  - IMEI (equipment identifier)
  - Call origin & destination
  - Usage and call charges
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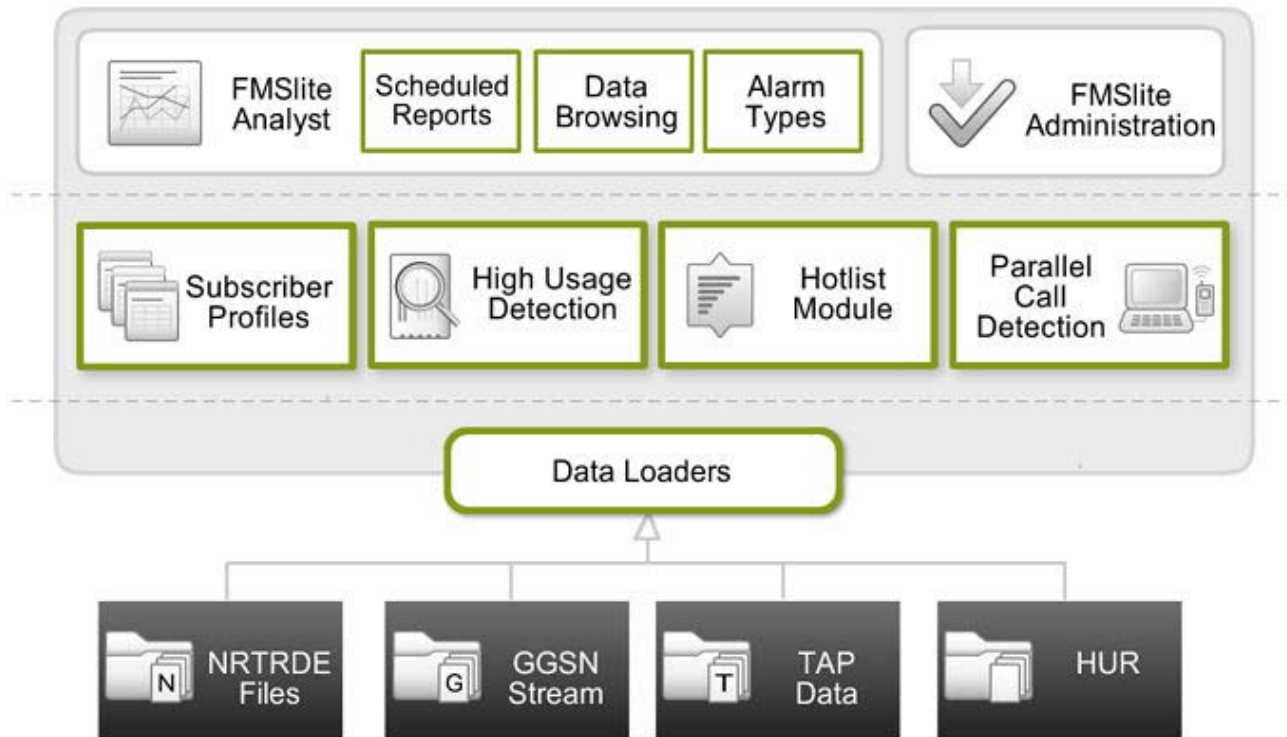
**Without full visibility, there is no control**

A decorative graphic at the bottom of the slide consisting of several overlapping, wavy lines in various colors (blue, green, red, purple) that create a sense of motion and connectivity.

# Xintec FMSlite™



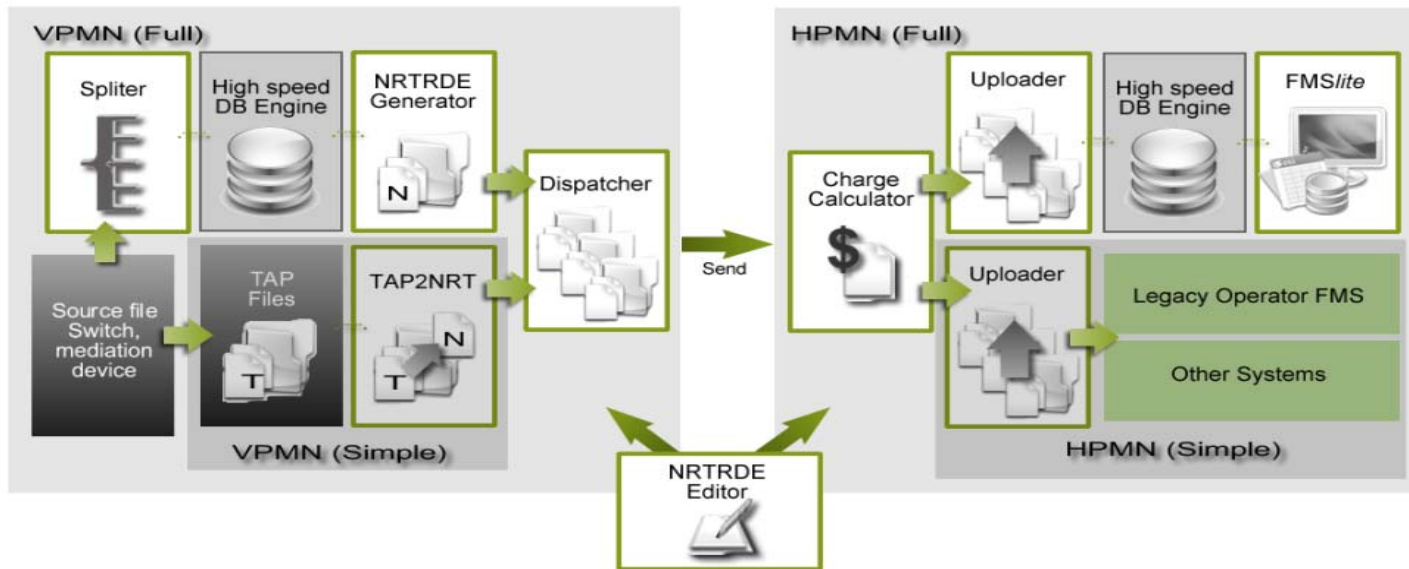
FMSlite™ integrates roaming information from different sources in a central database  
Applies fraud detection rules to detect/identify suspicious roaming usage  
Repository and web user interface for data retention and analytical needs



# Xintec: who we are



- IT service provider (software and services)
- Specialised in roaming data processing



- Positioned in a niche market between mobile network operators and data clearing houses





Thank you!

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