

CITINet



NRTRDE (Near Real Time Roaming Data Exchange) Collecting System

NRTRDE Collecting System protects you from roaming fraud!

Nowadays, more and more international travels are pushing the rapid growth of GSM market. That makes the service operators also face the risk of roaming fraud.

What is roaming fraud?

Using the services out of your service provider's network will need the roaming data exchange for billing. That means the delay in data exchange process is an opportunity window for fraudsters to take illegal advantage of it and cause significant revenue loss to operators.

How to combat and prevent roaming fraud?

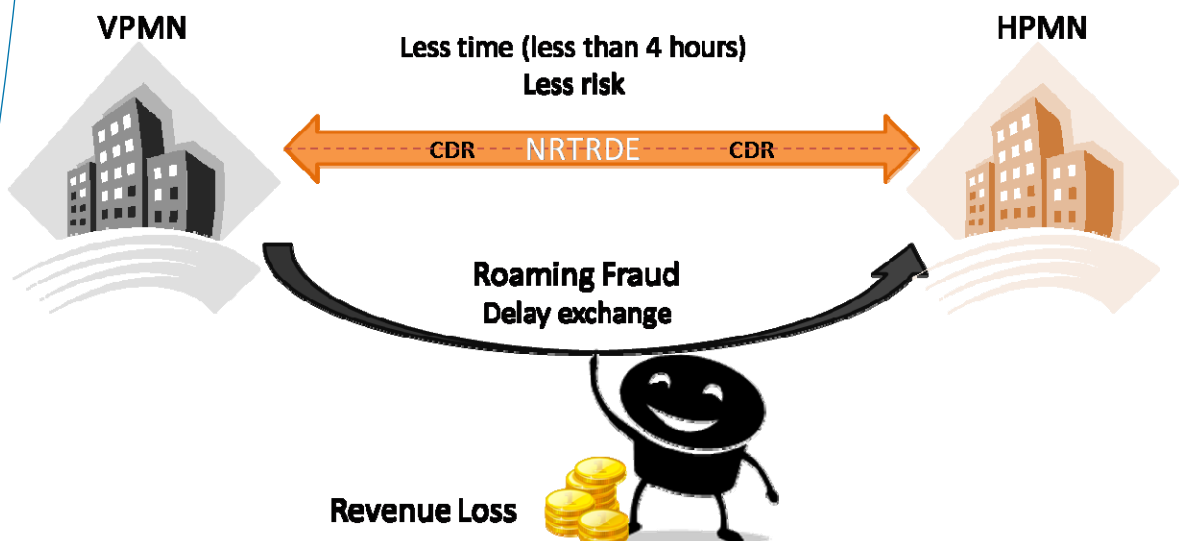
The key point is definitely speed up the data exchange between different roaming partners. Therefore, the GSMA (GSM Association) working groups have developed a CDR interchange workflow, and a format called Near Real Time Roaming Data Exchange (NRTRDE).

NRTRDE sends limited amount, but enough information for fraud analysis while reducing the delay to less than 4 hours. It provides a new method for moni-

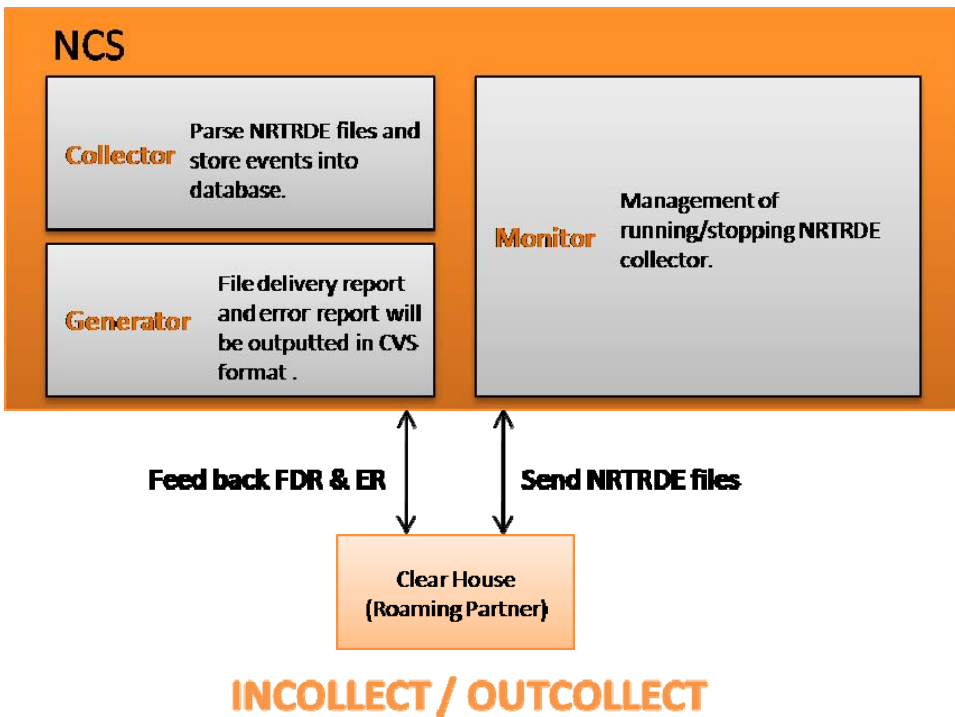


toring the customers' activities in the VPMN (Visited Public Mobile Network), and enables the HPMN (Home Public Mobile Network) to detect unauthorized network usage and other fraud issues near real time.

CITINet's NCS (NRTRDE Collecting System)



How does CITINet NCS Work?



◆ Incollect:

Parse and collect files such as NRTRDE, FDR, ER sent from roaming partner/clear house.

Generate file delivery report (FDR, in CSV format) and NRTRDE error report (ER) after parsing NRTRDE.

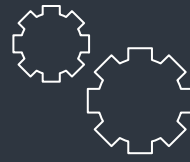
◆ Outcollect:

Generate NRTRDE according roaming MOC, MTC, GPRS BEs. Collect feedback from roaming partner/ clear house.

If error report is collected, alert the system operators. Operators ask for help from system manufacturer. Errors may cause mostly by program bugs. After bugs fixed, use NRTRDE regenerator.

Delivery report is collected and operator can analyze from report system. Check file list that delivered with FDR.

Select CITINet NRTRDE Collect System to Protect You from Roaming Fraud!



Features

- ◆ Supports all call record types (voice, data, SMS, GPRS)
- ◆ Comprehensive Web-based GUI
- ◆ Turnkey — interface with existed system in short time.
- ◆ Flexible error reporting format for TD.35 and any other format.
- ◆ High Availability / Cluster support.

Benefits



- ◆ Eliminate losses caused by roaming fraud using a high-quality solution
- ◆ The platform - CeDaR - is attested by BAPT
- ◆ Seamless change between HUR and NRTRDE is assured
- ◆ Smooth, even partner based changeover at any time convenient for you
- ◆ Support for pre-defined and ad-hoc roaming fraud reporting
- ◆ Continuous upgrade to upcoming GSMA recommendations
- ◆ Inbuilt 10+ years fraud competence and in-depth industry knowledge

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About CITINet

CITINet System Ltd was found as the subsidiary company of City University of Hong Kong in 2000.

We are

- one of the associated companies of CityU Enterprise
- set up to commercialize the R&D results.
- as a pioneer IT services and global provider of technology integration services in Telecom systems, providing the professional IT services for R&D project management, customer care and billing system for Telecom operators.

A good solution provider will not only integrate a new system for its customer but also make use of the present system to maximize the returns from IT investment. That's what we are acting. Combining our years of experience in IT and the knowledge and expertise in Telecom, we endeavor to provide our customer the "plug-in and run" sophisticated Telecom Systems: the easiest usage and the most optimization, so that the customers can fully utilize their resources. We provide the reliable and realistic approach to solve customers' problems and reach a win-win situation for both of us.

We commit ourselves on keeping up current virtue and endeavoring to improve in dealing with our customers. We are eager to develop business alliances established partnerships and enter into joint ventures. Whether you are visiting citinethk.com to consider CITINet as a trusted advisor, business partner, investment or employer, thanks for taking the time to learn more about our company.



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