



# Intelligent Border Roaming Solution

Maintains subscribers in your network when they roam on either side of international borders.

## Current Situation

When subscribers stay or travel near country borders, there may be areas where neighboring country networks have good coverage, causing the handsets to automatically select foreign networks.

Many subscribers, unaware of this registration, may stay with the foreign network for quite some time, resulting in high international rates/tariffs for both incoming and outgoing calls and SMSs, as well as loss of revenue to the home network operator. When later discovering the damages, these subscribers may claim compensation from their home operator for the extra cost incurred.

The operator's challenge is to discover and prevent these registrations, to preserve their revenue and maintain lower costs for their subscribers.

## Starhome's Solution

The Starhome® Intelligent Border Roaming™ solution utilizes the underlying technology of Starhome's Intelligent Preferred Network® Solution, as well as Starhome's field-proven experience in steering handsets to preferred networks.

Intelligent Border Roaming combines control over all registration attempts of roaming subscribers with interrogation of HPMN elements. The application then analyzes the sequence of roaming events to identify accidental registration to foreign visitor location registers (VLRs) near the border.

## Benefits of Starhome's Solution

- Leader of SoR technology
- Quality, field-proven product
  - 40+ live deployments and satisfied customers: tier 1 & 2 operators and groups
  - Proven business case: improves inter-operator tariffs (IOTs) by an average of 15 percent
- Easy to manage and control
  - Dynamic, user-friendly provisioning, monitoring and reporting tools
- Fast product delivery & deployment
  - Reliable network integration
  - Proven Telco-quality platform
- Comprehensive post-sale support and consulting

# Intelligent Border Roaming

## Key Features

- Intelligent application
  - Dynamic control over roaming allocation
- User-friendly, dynamic steering control
  - Advanced provisioning and reporting tools
  - Activation criteria by visited country/network, day/time and subscriber profile
- Front-end steering modules
  - Reliable platform
  - Field-proven
- Centralized configuration for operator groups
- Applicable for both SS7 and OTA based Steering of Roamers

Rejection algorithms are used to prevent handsets from selecting the foreign networks (and re-selecting the HPMN). The border location identification can be defined by VLR, location area, or even at the level of the individual cell.

The solution is applicable for both international and national borders.

Operators that prevent accidental roaming:

- Generate more traffic
- Increase revenue within their networks
- Save unnecessary compensation costs
- Maintain subscriber satisfaction

## Architecture

Starhome's IntelliGate™ Service Mobility Platform is integrated to the operator's SS7 network as a Service Node to which registration events (Update Location messages) are routed. Based on pre-configured applications and algorithms, IntelliGate relays registration attempts to the home location register (HLR) for acceptance, or rejects them by responding with standard GSM error messages. Using other standard GSM messages, the application interrogates near-border VLRs and HLRs for subscriber location, or optionally location-based servers.

## Summary

Intelligent Border Roaming ensures home network operators keep their subscribers in the network when they travel near international borders. As an added advantage, the home network operator can continue to serve outbound subscribers who cross borders but stay within range of the home network. The net result is increased operator revenue and customer satisfaction, with lower call rates.

**Starhome's SoR solutions will evolve to include Wi-Fi, Wi-Max and Fixed-Mobile convergence, via its participation with the Celtic SeMoNet project.**



## Starhome

Starhome® is a global leader in providing innovative, market-driven roaming solutions. Since its establishment in 1999, the company has grown and matured into an industry-recognized authority on roaming solutions. Leveraging its accumulated roaming knowledge to zero in on market needs, Starhome provides operators with innovative and lucrative management tools, making it the driving force behind roaming profitability. We have developed a comprehensive range of products and services that work in synergy to target market opportunities, spanning the full spectrum of roaming industry needs. Our industry-intelligent solutions strengthen your competitive edge in the constantly changing mobile market. Starhome's product portfolio serves each major aspect of roaming:

**Retail** products stimulate and increase roaming traffic and usability. For **Wholesale** requirements we offer powerful solutions to enable you to meet your business targets and IOT discount agreements. Our **Network Operations** offering includes solutions to optimize network efficiency, improve quality of service, and reduce cost of ownership.

Our service portfolio includes real-time, integrative roaming management and innovation tools -- working in collaboration with our product portfolio - that provide analysis, forecasts, simulations and recommendations, along with a current worldwide visualization of your roaming business. System tools provide real-time access to the information you need to maximize your business goals and strategies.