Datasheet

PathFinder

GSMA's NUMBER TRANSLATION SERVICE

A global ENUM-based service for route discovery and number portability

With the explosive growth of IP networks and services, the world has now become much smaller - and the next hop routing typical of the circuit-switched network is no longer adequate. There are thousands of service providers across the globe who can now potentially exchange voice, video, messaging, location, presence and other services. This opportunity requires the traditional telecom service providers such as fixed and mobile network operators, carriers and hub providers to implement cost efficient IP interoperability and accurate routing for such services. Additionally, this enables content and application providers from other business sectors such as financial, advertising, and infotainment to share in revenue models as they deliver rich IP services to end users. However, it is not practical for any of these service providers to maintain their own information for routing services to all potential trading partners. A consistent and scalable mechanism which dynamically discovers where IP traffic should be delivered is essential to enabling a world of widely interconnected IP networks. **The GSMA PathFinder™ Service fulfils this need.**

What is PathFinder?

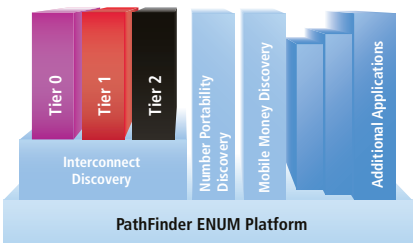
PathFinder is a private global address registry for dynamic route discovery with rich policy capabilities and is based on the GSMA Carrier ENUM standard.

PathFinder is a GSMA managed service operated by NeuStar for the industry. The service facilitates global IP service interoperability by translating telephone numbers to a logical "endpoint name" (e.g. SIP address, MMSC address, IMSC address, etc.) based on the source network.

PathFinder is available to all participants in the traffic/service delivery supply chain including Mobile and Fixed Network Operators, Transit Carriers/IPXs, Hubs/Aggregators, content/application providers and other trading partners.

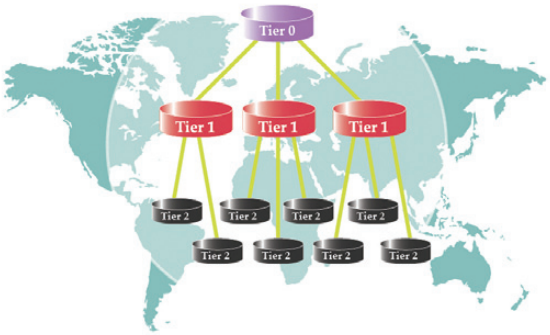
Extensible Architecture

PathFinder provides carrier ENUM data provisioned by Service Providers augmented with a global Industry dataset. The Carrier ENUM data can be provisioned across all three commonly understood 'tiers' (tiers 0 through 2). The industry dataset includes service attributes for number block and number portability assignments for operators worldwide.



PathFinder is an extensible ENUM solution for the industry. With its flexible architecture, the PathFinder ENUM platform is designed to support a variety of applications. Tier 0, 1 and 2 address discovery services enable Interconnection applications for voice, messaging, video, etc. The PathFinder Number Portability Discovery service identifies the true service provider for a subscriber, including in Number Portability markets.

e164enum.net



Compliance

GSMA IR.67 (DNS Guidelines for Operators)

ENUM and DNS RFCs: RFC1034, RFC1035, RFC1982, RFC1995, RFC1996, RFC2181, RFC2308, RFC2671, RFC2672, RFC2782, RFC3402, RFC3403, RFC3597, RFC3761, RFC4592, RFC4694, RFC4769, RFC4904

URI Schemes

H323	Presence
IM	SIP
Mailto	SMS
MMS	Tel

NAPTR Service Tags

E.212 MCC/MNC

Service Provider Network

Number Portability Dip Indicator

PathFinder

GSMA's NUMBER TRANSLATION SERVICE

Applications

Number Portability Discovery service

Interconnection for Packet Voice, Messaging, and RCS

APIs

SOAP XML Provisioning

ENUM Query

Zone Transfer

Performance/SLAs

Query Response – 20 ms

Query Availability – 99.999%

Provisioning Availability – 99.9%

Capacity – 5 Billion+ TNs

Local Query Node Option

Support – 24/7/365

Service Deployment and Infrastructure

PathFinder is offered with two deployment options:

Centrally Hosted Query Service: The principal means of accessing PathFinder is via a centrally hosted query service. The service is physically deployed at strategic GRX/IPX peering points.

Locally Hosted Query Service: Customers may choose to have a locally hosted, single-tenant instance of the PathFinder service located on their own premises.

PathFinder is offered as a high-availability carrier-grade service. Both provisioning and query elements of the Service are deployed in multiple sites and have redundant infrastructure to ensure resilience against various types of component failures. These mechanisms include typical high-availability networking infrastructure, load-balanced servers, and redundant components within all service elements.

PathFinder Core Functionality

PathFinder provides several key functions as part of the ENUM service:

- **Industry Data Hosting:** Out of the box, PathFinder contains all industry data for service providers in the global numbering plan, including portability corrected number assignments where available.
- **Provisioning:** PathFinder allows customers to publish their data via two types of interfaces: a SOAP/XML machine to machine API and secure Web-based GUI.
- **Provisioned ENUM Data Hosting:** PathFinder hosts subscriber addressing information provisioned by operators. This ENUM data remains under the ownership and control of the provisioning operator.
- **ENUM Query:** PathFinder manages the exchange of information between trading partners by enabling service providers to dynamically publish data relevant to their subscriber's IP services based on the inquiring party. This rich policy restricts discovery of addressing data to trading partners according to business arrangements.
- **Zone Transfer Service:** PathFinder enables customers to import the global Tier 0 data from the PathFinder ENUM tree into their own DNS infrastructure.

Key Attributes & Benefits

- **Global Reach:** A single Carrier ENUM registry with a global root providing one location for looking up any service to be delivered to anyone – worldwide.
- **Simplicity:** Allows service providers to offer multiple services behind the universally available phone number, ensuring transparent addressability and ease of use for their subscriber bases and trading partners.
- **Interoperability:** Supported by an Industry Partner Programme to ensure compatibility with any current and future IP service, pre-integrating technology suppliers and lowering the barrier to adoption for service providers.
- **Flexibility:** Rich Policy Engine providing a wide set of dynamic criteria, designating which trading partners in the supply chain will discover which routes, and enabling address and service attribute discovery based on business arrangements.
- **Cost Efficiency:** Pay Per Usage 'Software as a Service' business model with no CAPEX investment, no setup fee, no license fee, and no maintenance fee.

Contact Us

For more information, and to register your interest in the GSMA PathFinder Service, please email pathfinder@gsm.org