

# Mobile Number Portability

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**Abstract— Mobile Number Portability (MNP) requires that mobile telephone customers can keep their telephone number-including the prefix-when switching from one provider of mobile telecommunications services to another. Mobile Number Portability, allow you to switch your mobile phone operator from one mobile phone network provider to another mobile phone provider and keep your existing mobile phone number this also applies if you are crossing states across the country. You can switch your mobile phone operator or stay with the same operator in another state. This will prevent you from incurring roaming charges.**

## INTRODUCTION

The much awaited MNP (Mobile Number Portability) finally launched on 20th Jan 2011 in India, empowering mobile phone consumers to change service provider conveniently. Mobile Number Portability (MNP) allows the mobile subscribers to retain the existing mobile phone number when the subscriber switches from one access service provider (Operator) to another irrespective of mobile technology or from one technology to another of the same or any other access service provider, in a licensed service area. Mobile Number portability (MNP) enables mobile subscribers to change their service providers or their location without having to change their existing phone numbers. If the subscribers are not satisfied with the services of their service provider, they can change their service provider while retaining the existing phone number.

Given the growth of telecom services in India, and enhanced competition in the mobile sector, it is pertinent to deliberate about the issue of mobile number portability at this time. Operator portability both for fixed and mobile services, and service portability have been implemented in different parts of the world. It might be thought that number portability would have the greatest impact in maturing markets when service demand growth has eased and the market structure has become more rationalized. However, the decision to introduce number portability could be taken well before that. Market has further expanded in the next few years. In mobile networks, Number Portability involves only the MSISDN number, and not the IMSI. A subscriber who switches to another mobile network operator will be allocated a new IMSI (together with

a new SIM card) while retaining his MSISDN. Consequently Number Portability could affect all functionalities and services in mobile networks that are based on the MSISDN number, e.g.

- All mobile terminated calls
- All mobile originated calls
- Short Messages within the Short Message Service (SMS) and MMS
- Prepaid services
- Any service based on MSISDN

## SERVICE REQUIREMENT

- Regulatory
- Connection to the number database
- Call Routing

### Regulatory-

Before Number Portability can be implemented in a network, there either has to be a general requirement for introduction of Number Portability from the national regulator or a mutual agreement has to be made between network operators and service provider.

### Connection to the number database-

Generally for Number Portability, there is a need either for a central reference number database (CRDB) or a system of networked databases normally the national regulator or a consortium of national operators decides which of these solutions shall be used in a country. So far, directives for Number Portability are not crossing country boundaries. In order to install and implement Number Portability,

### Call Routing-

- Types of Number Portability
- Service Provided Number Portability call routing Schemes

### Types of Number Portability-

The various types of number portability are:-

- Service Provider Number Portability: Subscribers can change the service provider

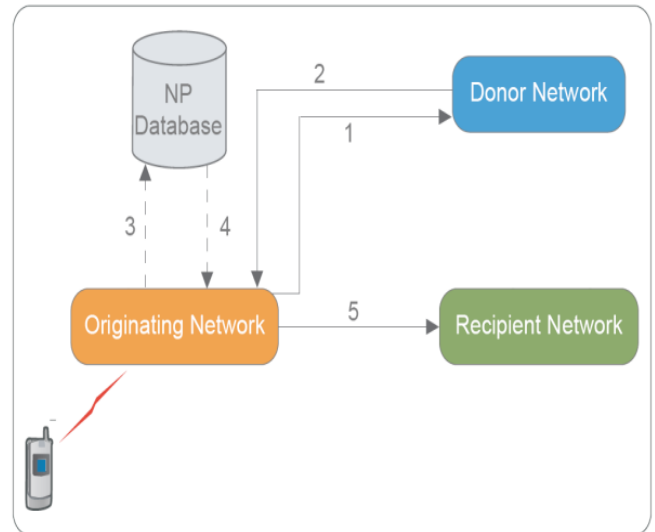
while retaining the same phone number. It is also called operator portability.

- **Location Number Portability:** Subscribers can change the subscribed services while retaining the same telephone number. Service portability allows the subscribers to enjoy the subscribed services in the same way when they roam outside their home networks. This paper discusses service provider number portability (SPNP), as SPNP is the primary form of number portability that promotes competition among the mobile service providers.

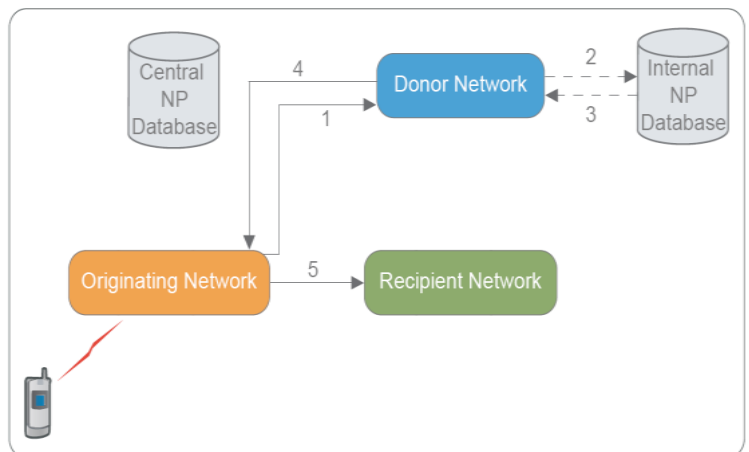
**Service Provided Number Portability call routing Schemes-** The Internet Engineering Task Force (IETF) has defined four flavours of call routing that support number portability. These schemes are:-

- All Call Query (ACQ)
- Query on Release (QoR)
- Call Drawback.
- Onward Routing (OR)

All Call Query (ACQ) –

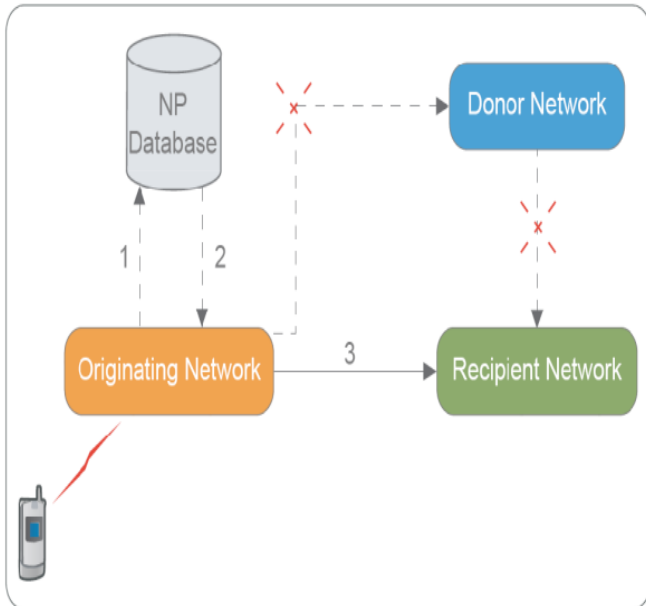


Call Drawback-



### CONCLUSION & BENEFITS-

The main advantages of the Number Portability service are: For the Network Provider it makes it possible to offer service subscribers a direct access to their network without need for changing the telephone number giving, More inbound traffic, Higher customer loyalty, Higher company value. Makes way for true competition by making it possible to offer new services also for incoming calls to the service subscribers. Gives the network operator a better view of all traffic related to his customers. Gives the network operator better control over the quality of routing. For the Service Subscriber, Makes it possible to change network



Query on Release (QoR)-

provider without changing telephone number. Makes it possible to change geographic location without changing telephone number. Makes it possible to change service mix without changing telephone number. Makes it possible to choose new service providers also for incoming traffic as the same time as preserving the telephone number.