1. Handling of virtual numbers

Numbering Plan

- **Valid E164**
  - Assigned to (national) authority
  - Assigned to PSTN operator
  - Used for VoIP/VC

- **ENUM (NRENum.net)**
  - Virtual numbers used for Internet communication only (VoIP, VC)
  - Valid E164 numbers taken by ENUM and linked to an internet address (URI) which is published in the DNS system
  - Numbers that NRENum.net wants to regulate and cover
  - (Any) numbers taken by ENUM and linked to an internet address (URI) which is published in the DNS system

- **International public telecommunication numbers used in the PSTN and some other data networks (not necessarily assigned to authorities)**

- **Valid E164 numbers assigned to national regulator authority or special global organisations**

- **Existing PSTN numbers assigned to number holder operator**

- **Existing PSTN numbers used for Internet communication (VoIP, VC)**

- **Valid E164 numbers used for Internet communication (VoIP, VC)**

- **Virtual numbers used for Internet communication only (VoIP, VC)**

- **Existing PSTN numbers used for Internet communication (VoIP, VC)**
1. Handling of virtual numbers

Do you or your users already use virtual numbers in the communication infrastructure (Videoconferencing, VoIP, other)?

- Yes 63.15%
- No 26.31%

END

Where do you think virtual numbers should be populated under?

- Inside the existing NRENNum.net tree 63.15%
- In a separate ENUM tree, dedicated only to virtual numbers 15.78%

END

What do you think the domain of the separate virtual NRENNum tree should be?

To access the virtual NRENNum tree, should users dial a specific selector?

END

Assuming that the NRENNum.net tree will be used to populate virtual numbers, where do you think virtual numbers should be delegated?

- Outside the national dialling plans; a globally unique, worldwide virtual “country code” prefix should be selected 10.52%
- Inside each national dialling plan; a non-clashing virtual “area code” prefixes should be selected 84.21%

END

How do you think a worldwide virtual country code prefix should be selected?

How do you think the virtual number delegation under the worldwide prefix should be managed?

END

Please, express your view on the possibility of creating such a prefix (i.e. sandbox) within your national dialling plan.

Please, express your view on the possibility of creating such a long virtual numbers within your national dialling plan.

END
1. Handling of virtual numbers

1. Off-tree: Create and populate a separate tree for VN
   <4.3.2.1.virtual.nrenum.net>

2. On-tree: Use nrenum.net
   A. Outside NDP (pick a virtual country code e.g., +83)
      i. Flat numbering plan (central administration!)
         <4.3.2.1.3.8.nrenum.net>
      ii. Reproduce country code structure
         <4.3.2.1.CC.3.8.nrenum.net>
   B. Inside NDP (where possible)
      i. Unused/reserved area codes (sandbox)
         <4.3.2.1.AC.CC.nrenum.net>
      ii. Number extension with additional digits (wild-card)
         <4.3.2.1.x.x.x.x.x.x.x.x.6.3.nrenum.net>
Conclusions

• Do not change the NRENum.net policy!
• Try to make the virtual numbers legitimate, instead.
• NREN recommended roadmap:

1. Initiate discussion with your national regulator about using a sandbox/superspace inside your national dialling plan to populate VNs;
   • try and get permission to use,
   • alternatively, promote the use.

2. NRENum.net Operations Team picks an unused CC at the global level to populate VNs;
   • Create a pilot tree (separate) that gets the NRENum.net data and populates the global CC with virtual numbers