# ENUM validation architecture & friends

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`draft-ietf-enum-validation-arch`
`draft-ietf-enum-validation-epp`
`draft-lendl-enum-validation-token`

# Introduction

- enum.at provides commercial ENUM registry services for Austria (+43)
- SWITCH provides Registry for the Swiss ENUM Trial (+41)
- Cooperate on standardization of ENUM validation in the IETF
- Others are invited to join!

# Motivation & Goals

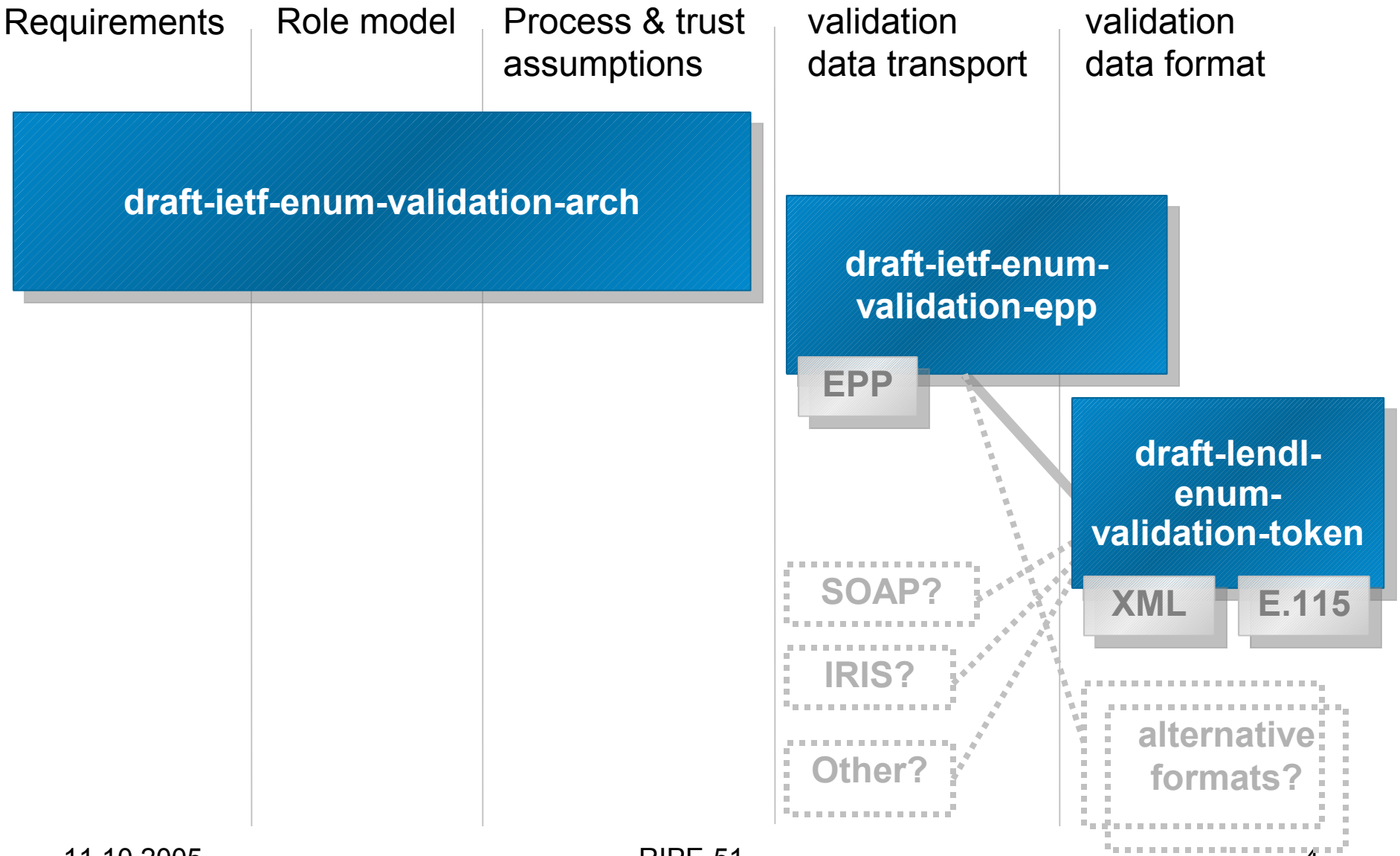
## Motivation:

- Solving validation is crucial for ENUM deployment
  - Major reason why trials precede production
  - Validation is the major difference between ENUM and "ordinary" domain registration
- Validation definition and requirements currently vague
  - Common view considered useful

## Major Goals:

- Common understanding
  - Terminology, Processes, Roles, …
- Keeping entropy low
  - Minimize number of solutions addressing same problem
  - Prevent reinventing the wheel – foster deployment instead

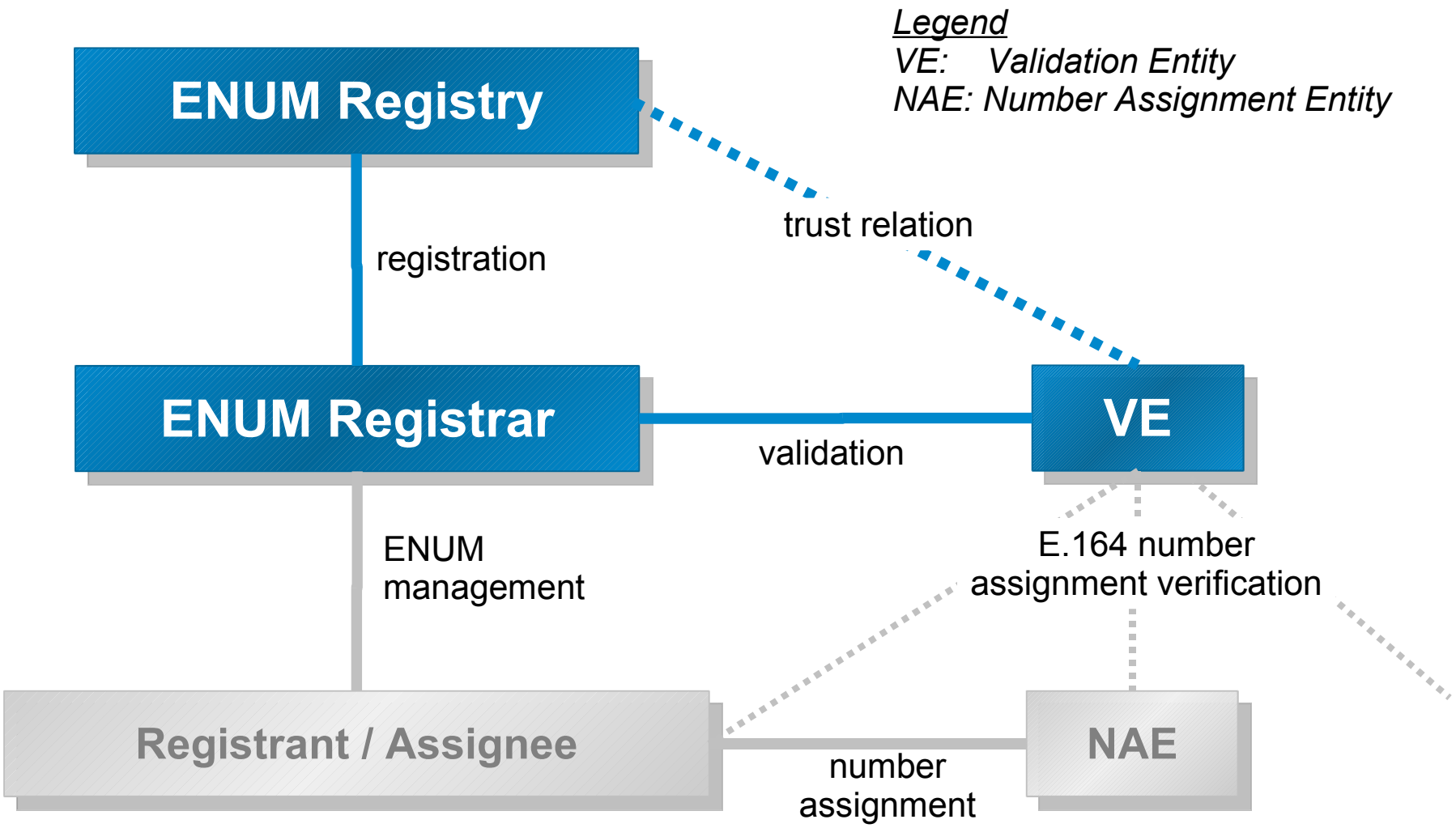
# validation draft orientation map



# Disclaimer

- It is out of scope of these documents how an actual validation is performed ("validation method")
- The documents just attempt to provide a generic framework to base validation processes and communication on.

# ENUM Provisioning Model & Roles



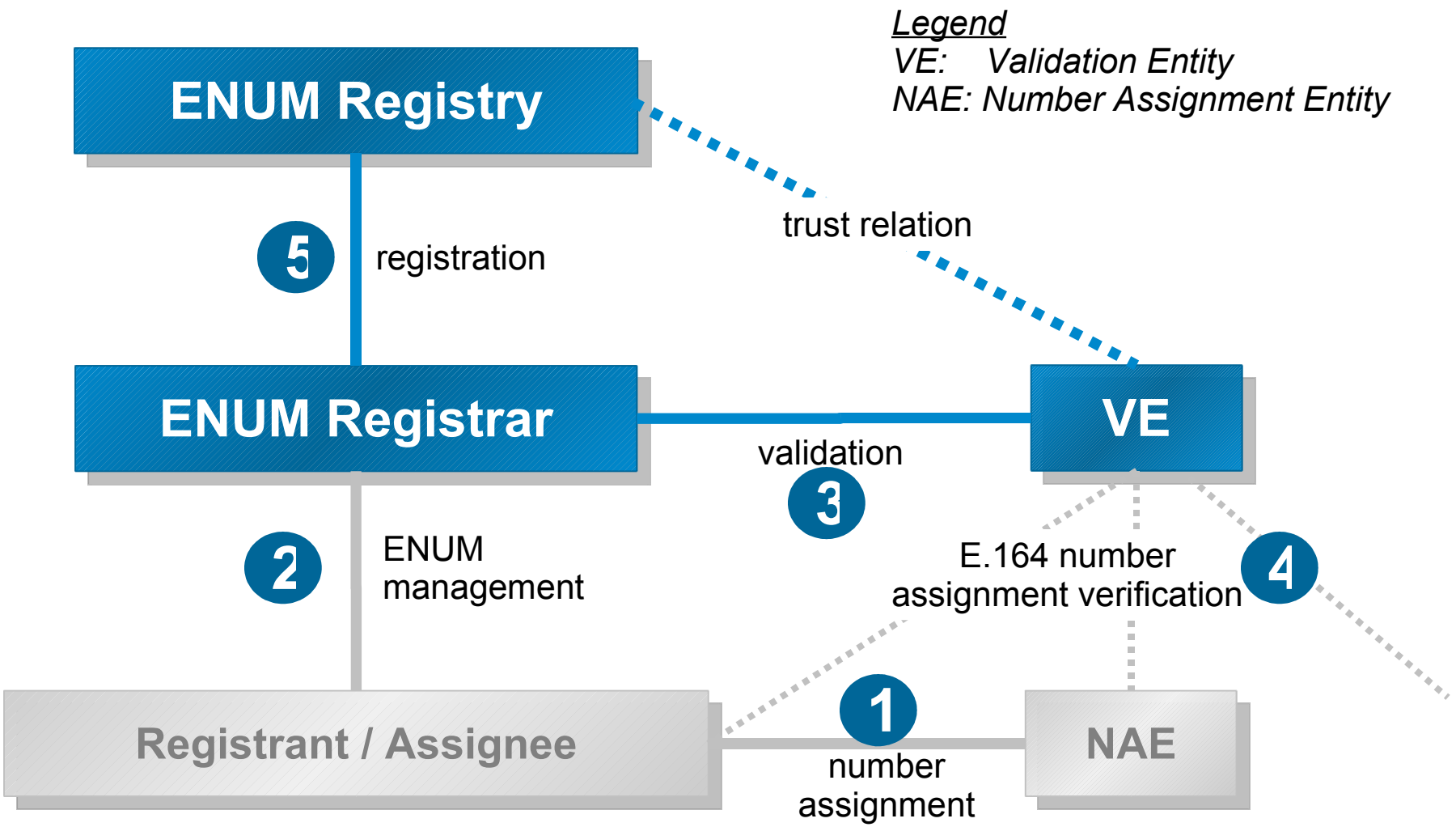
# Validation Requirements

1. The ENUM domain name corresponds to an **assigned E.164 number**
2. The corresponding E.164 number is within a **number area approved to be used with ENUM**
3. The **registration** of the ENUM domain name **is authorized by the Assignee** of the corresponding E.164 number
4. **The Registrant of the ENUM domain name is identical to the Assignee of the corresponding E.164 number**

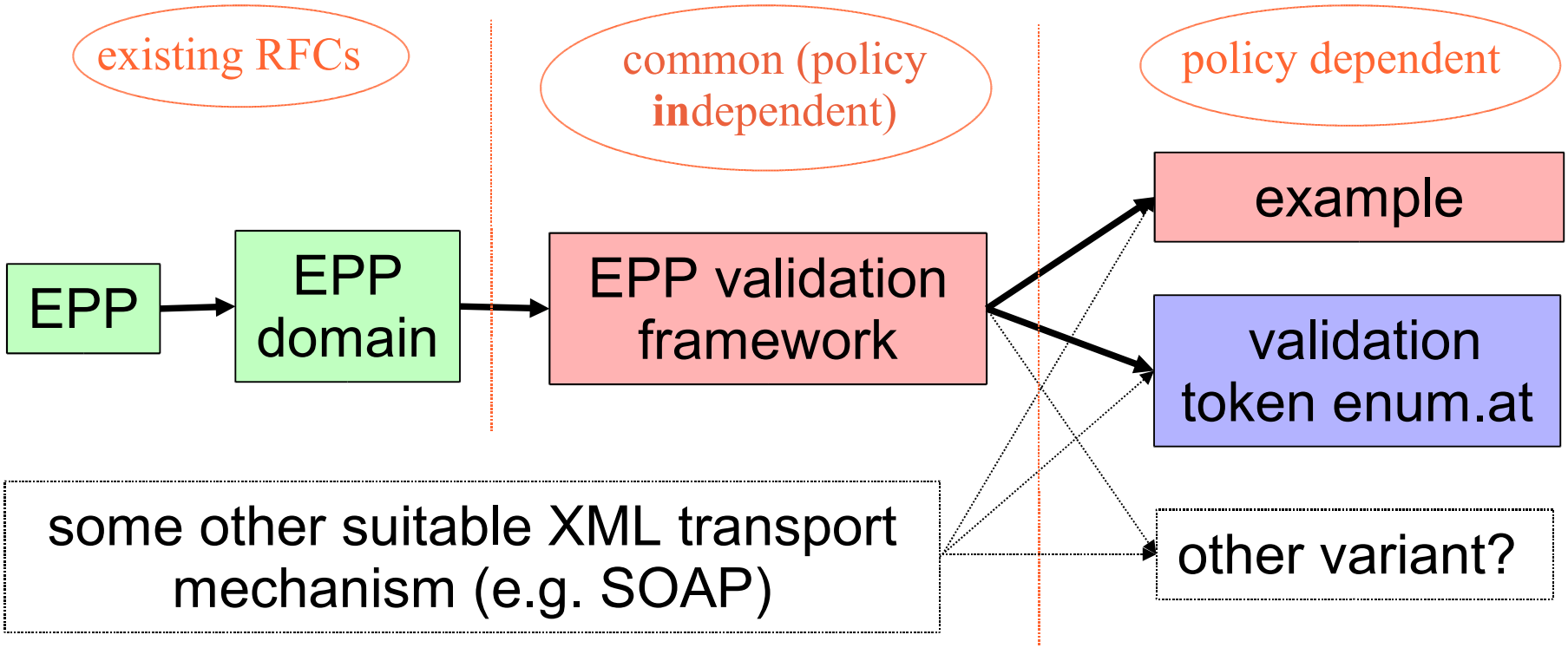
# Initial vs. recurring validation

- Initial Validation
  - Verify requirements before registration of the ENUM Domain takes place
- Recurring Validation (Re-Validation)
  - Verify that requirements are still satisfied
    - Usually making use of data acquired during initial validation
    - ENUM domain is to be removed when corresponding E.164 number is e.g. revoked

# Registration process assumption



# Transport / data format extension framework




Scott's EPP RFCs

draft-ietf-enum-validation-epp

draft-lendl-enum-validation-token

# EPP transport

- Framework for **Transport** of validation information along with the EPP Domain object

- Elements for validation information itself are out-of-scope of this document
  - Example for better readability included

  - ▶ enables usage of different locally adjusted validation information elements or "tokens"

# Validation Token

- Conveys information about a validation
  - E.164 Number (obviously)
  - Contact information (in the style of EPP and E.115)
  - Serial, validation method, validation entity, expiration, …
- XML schema
- Optional cryptographic signature
  - Non-repudiation
  - Authenticity
  - Supports trust relation between VE and Registry
- To be embedded in transport protocols
  - EPP (draft-ietf-enum-validation-epp, enum.at implementation)
  - SOAP? Email? HTTPS?
- In productive use for 3.4.e164.arpa.
- Probably useful for other purposes (number porting?)

# Feedback request!

- How are you going to do validation?
- How will you implement it?
- What prevents you from using the architecture just presented?
- What would you like to see in those validation documents?