SIP Forum
User Agent Configuration

One protocol to find them all

and on the network configure them.

SIP FORUM

Status

- The UA-config Task Group has completed a draft Recommendation: http://www.sipforum.org/component/option,com_docman/task,doc_download/gid,410/Itemid,261/
- The SIP Forum feels it would be more appropriate to publish as an IETF RFC
- I-D submitted today (draft-lawrence-sipforum-user-agent-config-00)
- Hoping to achieve rapid publication as an Informational RFC through the AD-sponsored route
- Testable implementations expected at SIPit 26 (April 2010)

Provider Alias Number (PAN)

- Optional mechanism to allow a user to enter a numeric identifier for a SIP Service Provider, which can then be converted to a domain name (for devices with only a telephone keypad)
- Requires establishment of a registry
- SIP Forum establishing a Task Group to explore ways of establishing the registry
- Mechanism documented in a separate I-D submitted to DISPATCH today - (draft-lawrence-dispatch-sipforum-provider-alias) (also exists as an informative appendix to the SIP Forum spec)

Dependencies

- http://www.ietf.org/id/draft-sipforum-ua-config-02.txt (in AD Evaluation)
  - Registers the U-NAPTR Application Service Tag SFUA.CFG (for finding a Configuration Service)
  - Registers the S-NAPTR Application Service Tag SFUA.PAN (for finding a Provider domain from a Provider Alias Number (PAN)
  - Planned to withdraw in favour of including registrations in the respective RFCs
- http://www.ietf.org/id/draft-roach-sip-http-subscribe-07.txt (in RFC Ed Queue)
  - Event package for reporting the fact that an HTTP resource has changed, in this case a configuration change
- http://www.ietf.org/id/draft-nottingham-http-link-header-08.txt (awaiting AD go-ahead)
  - HTTP link header (used by event package)

Relationship to sipping-config-framework

- Assumes a single source of configuration data
  - Does not require the UA to obtain different parts of the configuration from different service providers
- Simplified HTTP-oriented boot process
  - Prior to loading configuration data, only DHCP, DNS and HTTP are user; SIP is used only for change notification after configuration is loaded
- Simple, generic event package, just for change notification
  - Can be re-used for other purposes, such as changes to proxy configuration (see BLISS ACH work)

Back-up slides

The Problem

- SIP User Agents (mostly phones) are not plug-and-play – even a minimal SIP configuration usually requires:
  - Domain or server name(s)
  - User identities
  - Options compatible with the service
- Configuration complexity is a significant barrier to adoption

Goals

- Discover where the UA is (IP parameters)
- Discover the domain to ask for configuration
- Locate the UA Configuration Service for the domain
- Request a configuration
  - Service selects/generates configuration based on user or device (service decides)
- Find out when the configuration changes

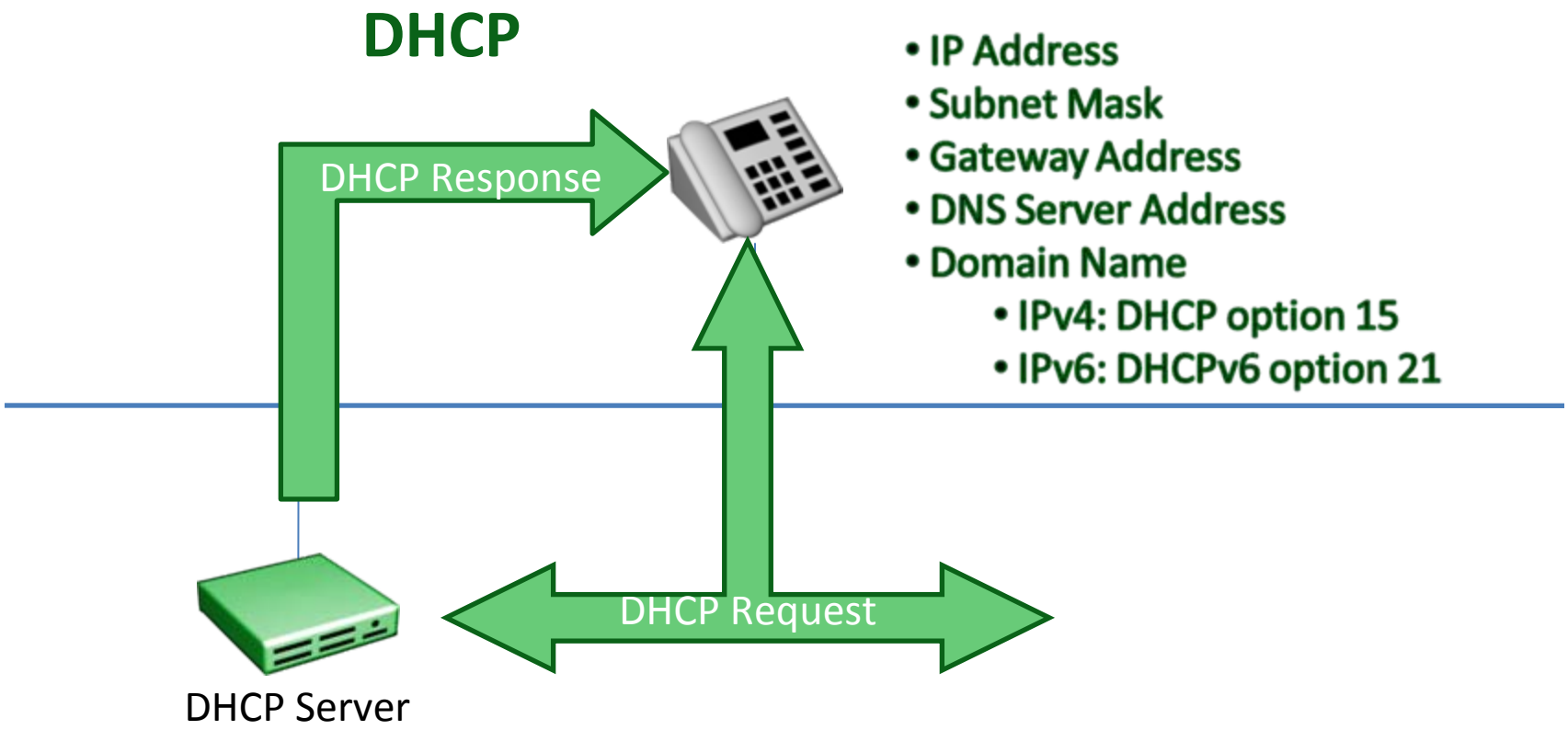
Non-Goals

- Configuration data format
  - UA Configuration Service provides a configuration in the format required by the UA.
- Multiple sources of configuration
  - UA Configuration Service provides a complete configuration.

UA wakes up

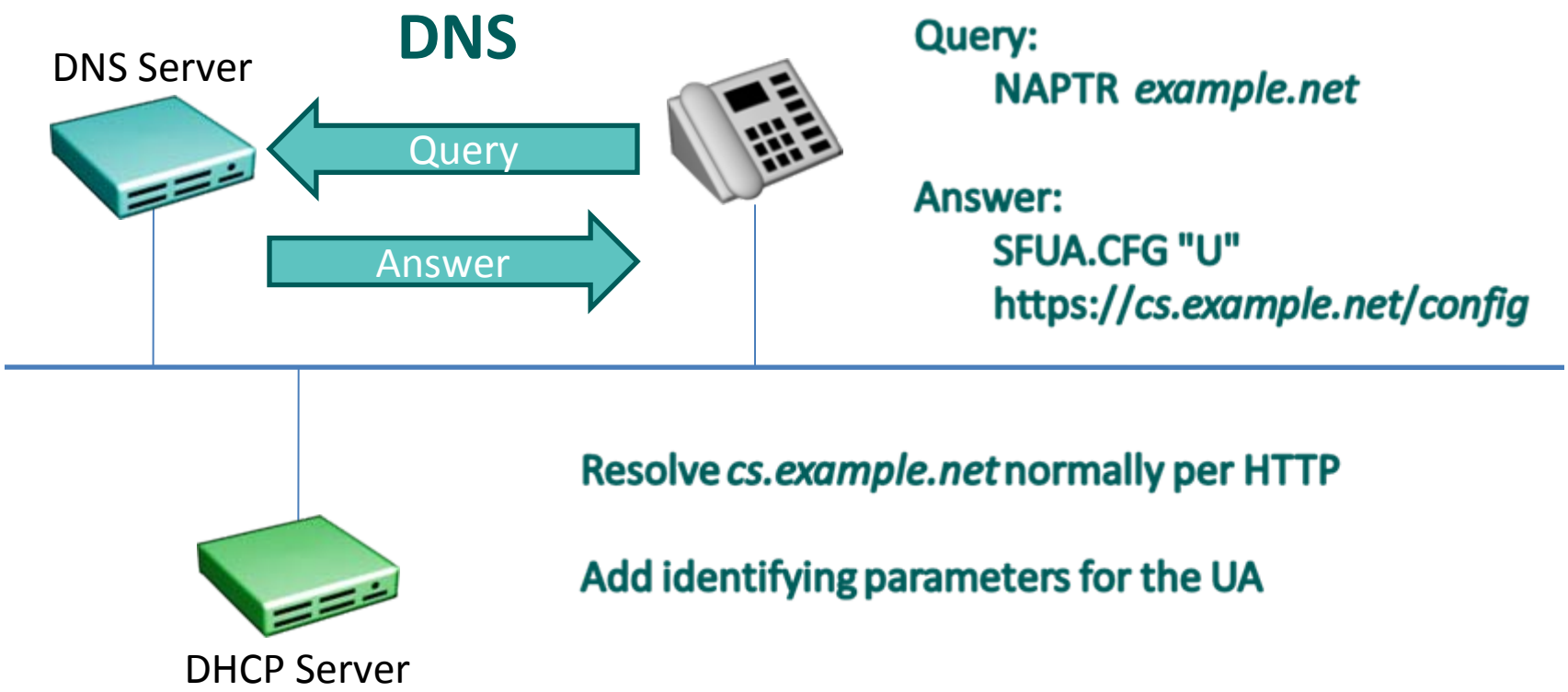
Prior configuration may determine whether or not the UA attempts to use this configuration process, including which steps may be skipped.

Get Local Network Information



To get configuration for the local SIP domain, start with the Domain Name

Find Configuration Service URL

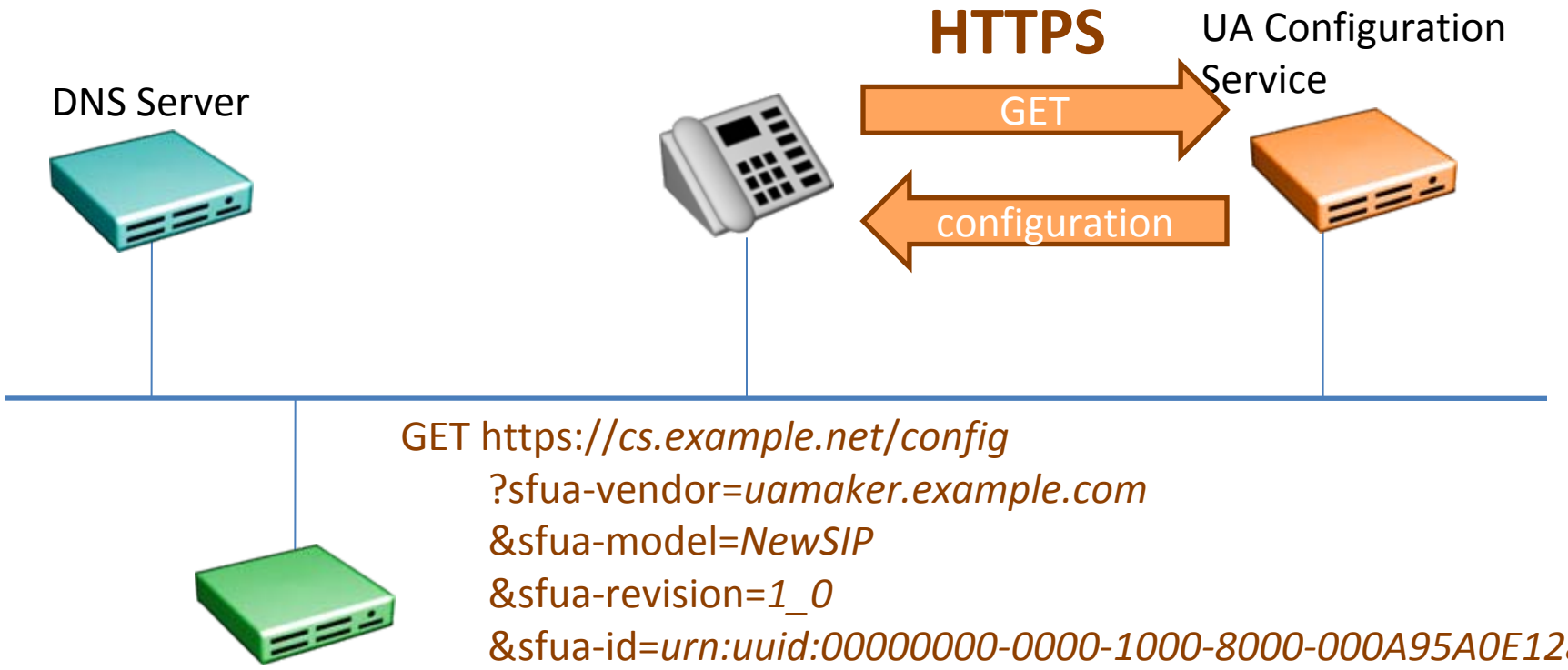


Identifying HTTP Query Parameters

Name	Meaning	Syntax
`sfua-user`	The user	RFC 3261 ‘user’
`sfua-id`	The User Agent instance (UUID)	URN as defined in RFC 5626 (outbound)
`sfua-vendor`	The vendor of the User Agent	DNS domain name
`sfua-model`	The model of the User Agent Chosen by the vendor	RFC 3261 ‘token’
`sfua-revision`	The version within the model value of the User Agent	RFC 3261 ‘token’
*generic-param (name must not start with ‘**`sfua-`**’)*	anything	RFC 3261 ‘token’

UA sends all values it knows; Service ignores any it does not need

Request SIP UA Configuration



GET https://*cs.example.net/config*
?sfua-vendor=*uamaker.example.com*
&sfua-model=*NewSIP*
&sfua-revision=*1_0*
&sfua-id=*urn:uuid:00000000-0000-1000-8000-000A95A0E128*

HTTP/1.1 200 OK
Etag: *3783rjmuqaoq911*
Link: sip:*uacfg.example.net;cfg=72341110000111*;rel=monitor
Content-Type: *vendor-defined*
<configuration-body>

HTTP Flexibility

GET https://*cs.example.net/config*
?sfua-vendor=*uamaker.example.com*
&sfua-model=*NewSIP*
&sfua-revision=*1_0*
&sfua-id=*urn:uuid:00000000-0000-1000-8000-000A95A0E128*

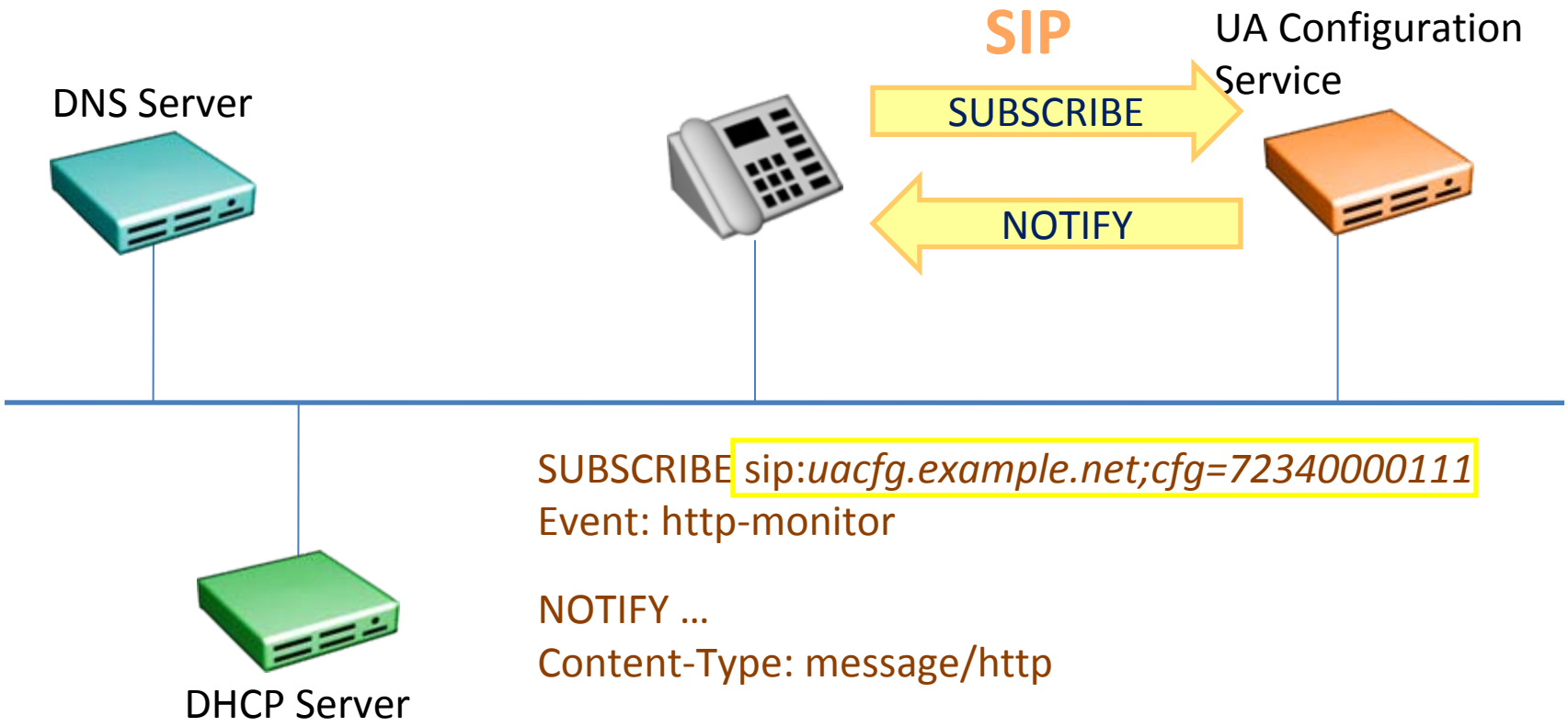
HTTP/1.1 302 Redirect
Location:
https://*uacfg.example.net/cfg/sip/000A95A0E128.xml*

GET https://*uacfg.example.net/cfg/sip/000A95A0E128.xml*

HTTP/1.1 200 OK
Etag: *3783rjmuqaoq911*
Link: sip:*uacfg.example.net;cfg=72340000111*
;rel=monitor
Content-Type: *vendor-defined*
<configuration-body>

Request Change Notices

draft-roach-http-subscribe



SUBSCRIBE sip:*uacfg.example.net;cfg=72340000111*
Event: http-monitor

NOTIFY …
Content-Type: message/http

HTTP/1.1 200 Ok
Etag: *3783rjmuqaoq911*
Link: sip:*uacfg.example.net;cfg=72340000111*;rel=monitor
Content-Type: *vendor-defined*

SIP Subscription to HTTP Resource

GET https://*uacfg.example.net/*
cfg/sip/000A95A0E128.xml

SUBSCRIBE
sip:*uacfg.example.net;cfg=72340000111*
Event: http-monitor

HTTP/1.1 200 OK
Link: sip:*uacfg.example.net;cfg=72340000111*
;rel=monitor
Content-Type: *vendor-defined*
Etag: *3783rjmuqaoq911*

<configuration-body>

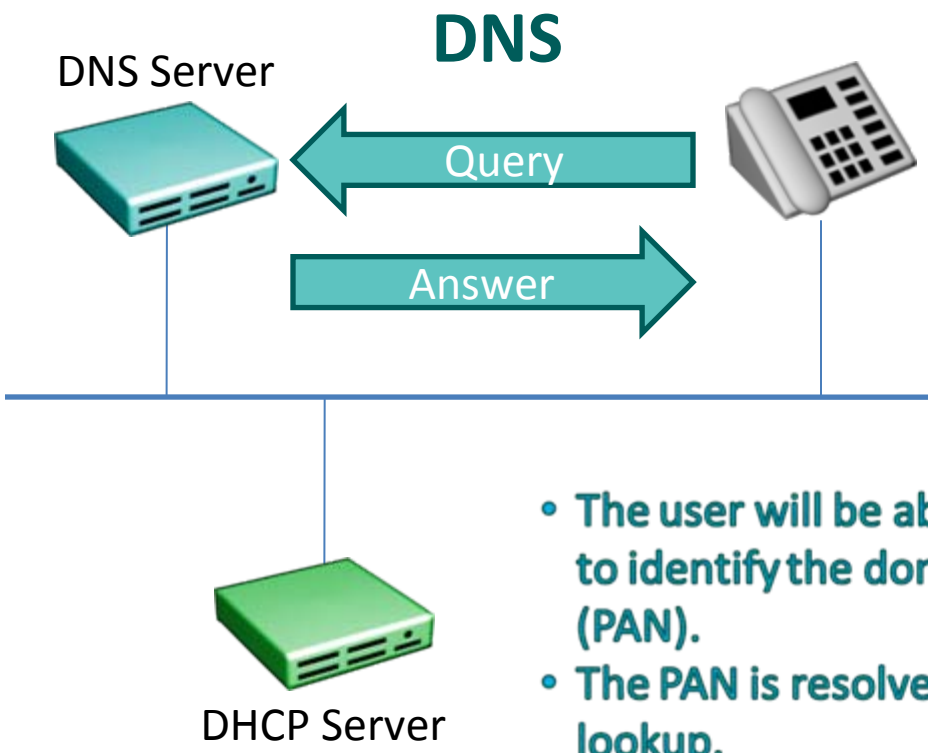
NOTIFY …
Content-Type: message/http

HTTP/1.1 200 Ok
Etag: *449282kfmdkdffixx*
Link: sip:*uacfg.example.net;cfg=72340000111*
;rel=monitor
Content-Type: *vendor-defined*

SIP FORUM

Configuring a Non-Local Domain

The SIP Configuration Domain may be provided manually.
An alias mechanism is described for a future version of the Recommendation.



- The user will be able to enter a string of decimal digits to identify the domain called a Provider Alias Number (PAN).
- The PAN is resolved to a DNS name through a NAPTR lookup.
- This feature depends on the establishment of a registry, which is the subject of new SIP Forum work.