

# The Domain Name System

Jelte Jansen

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# Introduction

- The Domain Name System (DNS)
- Stichting Internet Domeinregistratie Nederland (SIDN)
- Registering Domains



# Stichting Internet Domeinregistratie Nederland (SIDN)

- Maintains the '.nl' part of the DNS
- 5.4 Million .nl domains



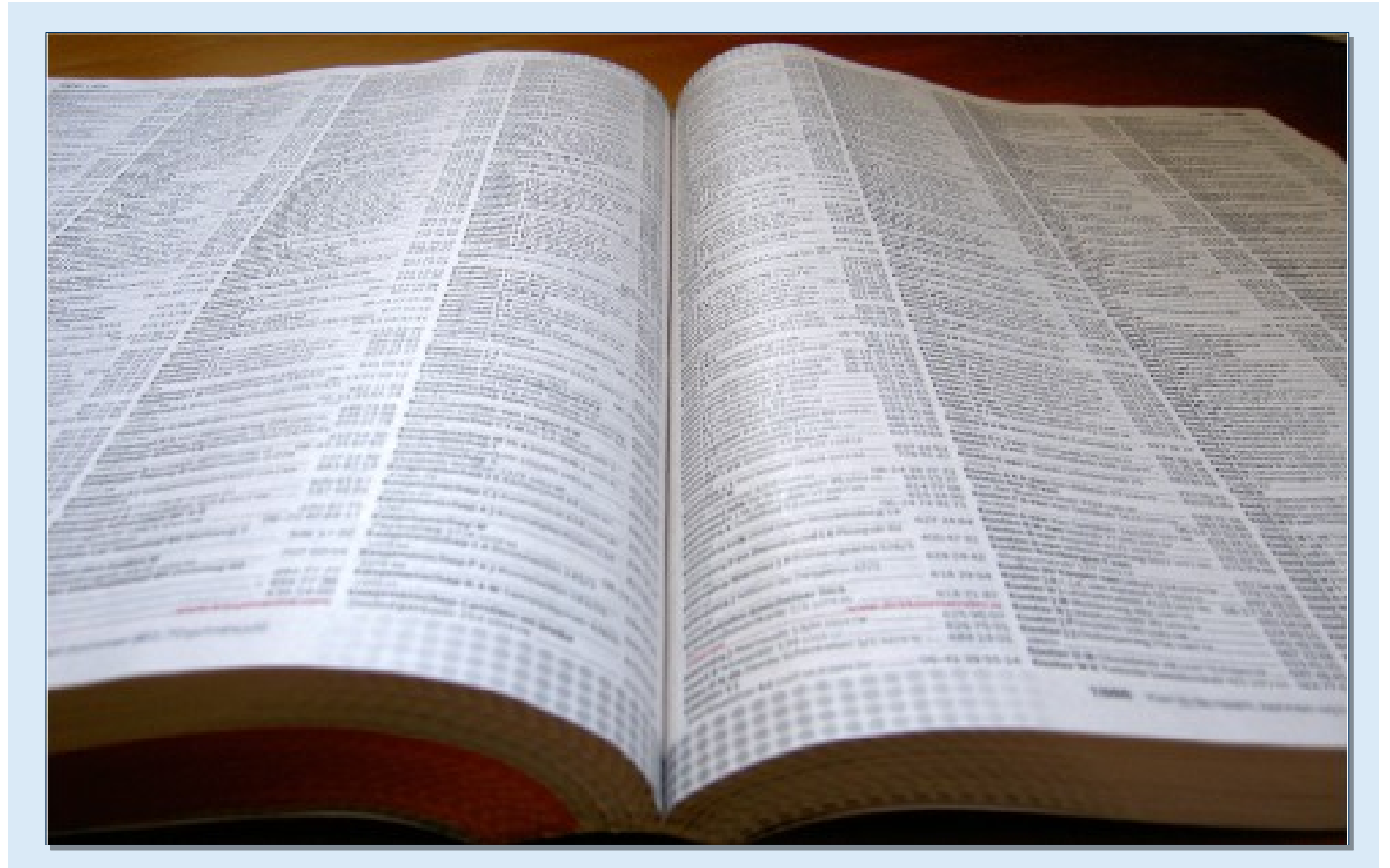
# SIDN Labs

- R&D team SIDN
- Further improve SIDN's services
- Centre of expertise
- Raise level of security of Internet in the Netherlands
- Facilitate external research
  - Such as PI.lab



# Domain Names

- [www.uvt.nl](http://www.uvt.nl) →  
137.56.209.21
- [www.uvt.nl](http://www.uvt.nl) →  
2001:610:1410:280:24ee:f0cd:bb36:7745



# Domain names are everywhere

- <https://www.sidn.nl/en/about-sidn>
- [jelte.jansen@sidn.nl](mailto:jelte.jansen@sidn.nl)
- Internet of things; devices discover each other using (m)DNS



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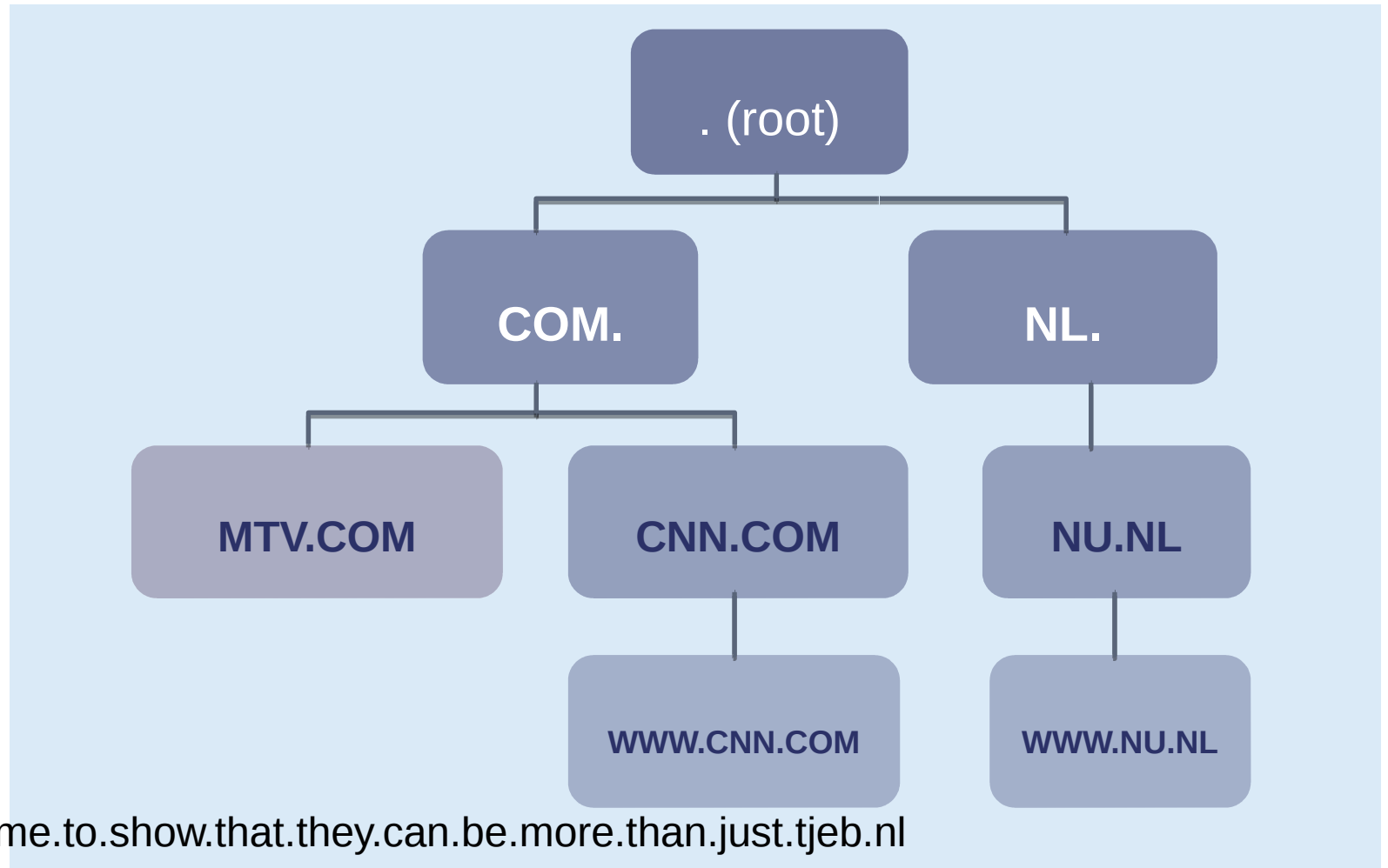
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# Hierarchy

- 'root'
- Top-level domains
  - .com .net .edu (and many more)
  - .nl .be .uk
  - (and many many more)
- Second-level domains
  - uvt.nl
  - facebook.com
  - (and over 200 million more)
- Many levels possible
- this.is.a.long.multilabel.domain.name.to.show.that.they.can.be.more.than.just.tjeb.nl



# Country Code Top-Level Domains

- Must have ISO 3166 code (NL, BE, DE, etc)
- Always two letters
- Delegated on behalf of government
  - But often to private parties



# General Top-Level Domains

- Not tied to geography
- Always 3 or more letters
- Open for registration at ICANN
  - But with a lot of rules

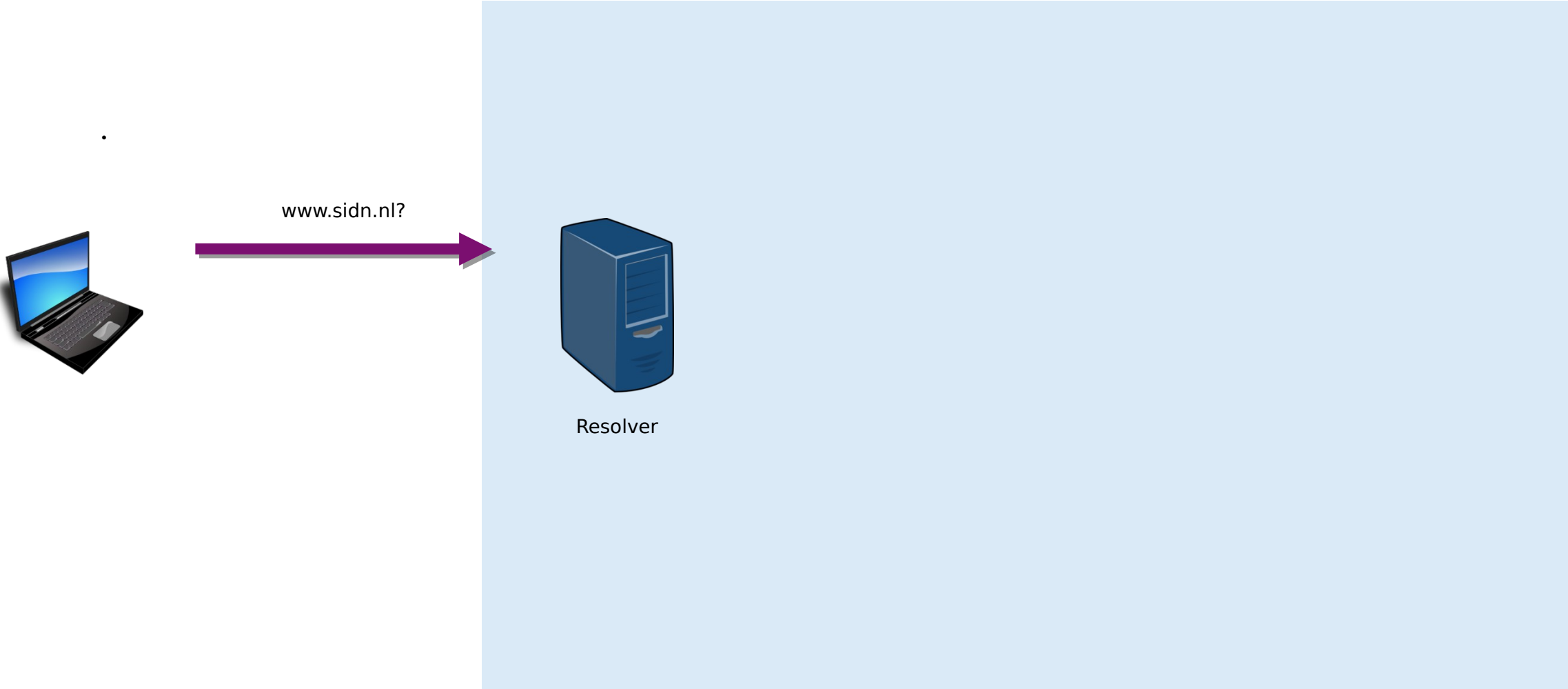


# A Brief History of DNS

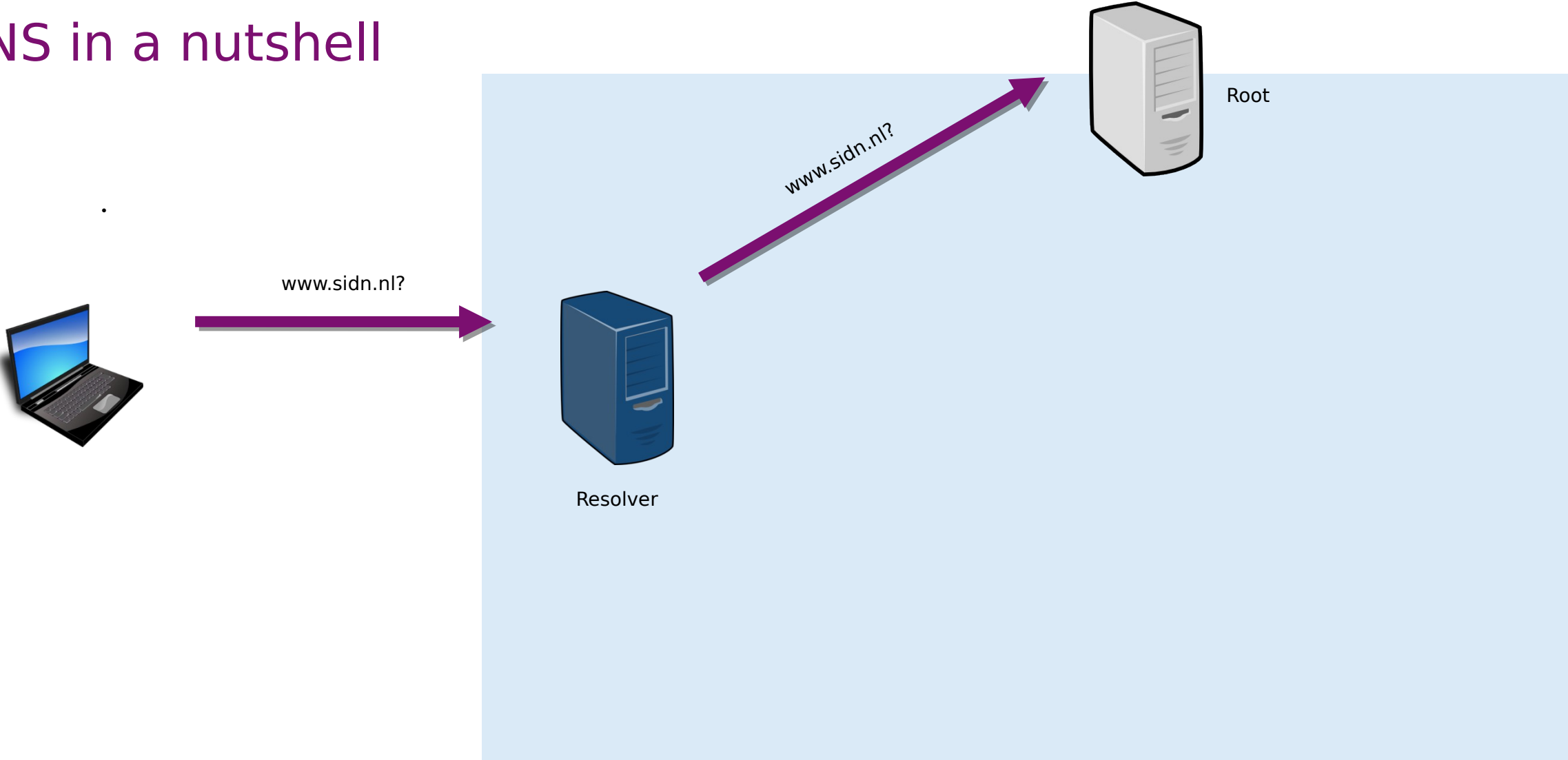
- Designed in 1983
- Current base specification in 1986
- But updated and extended ever since



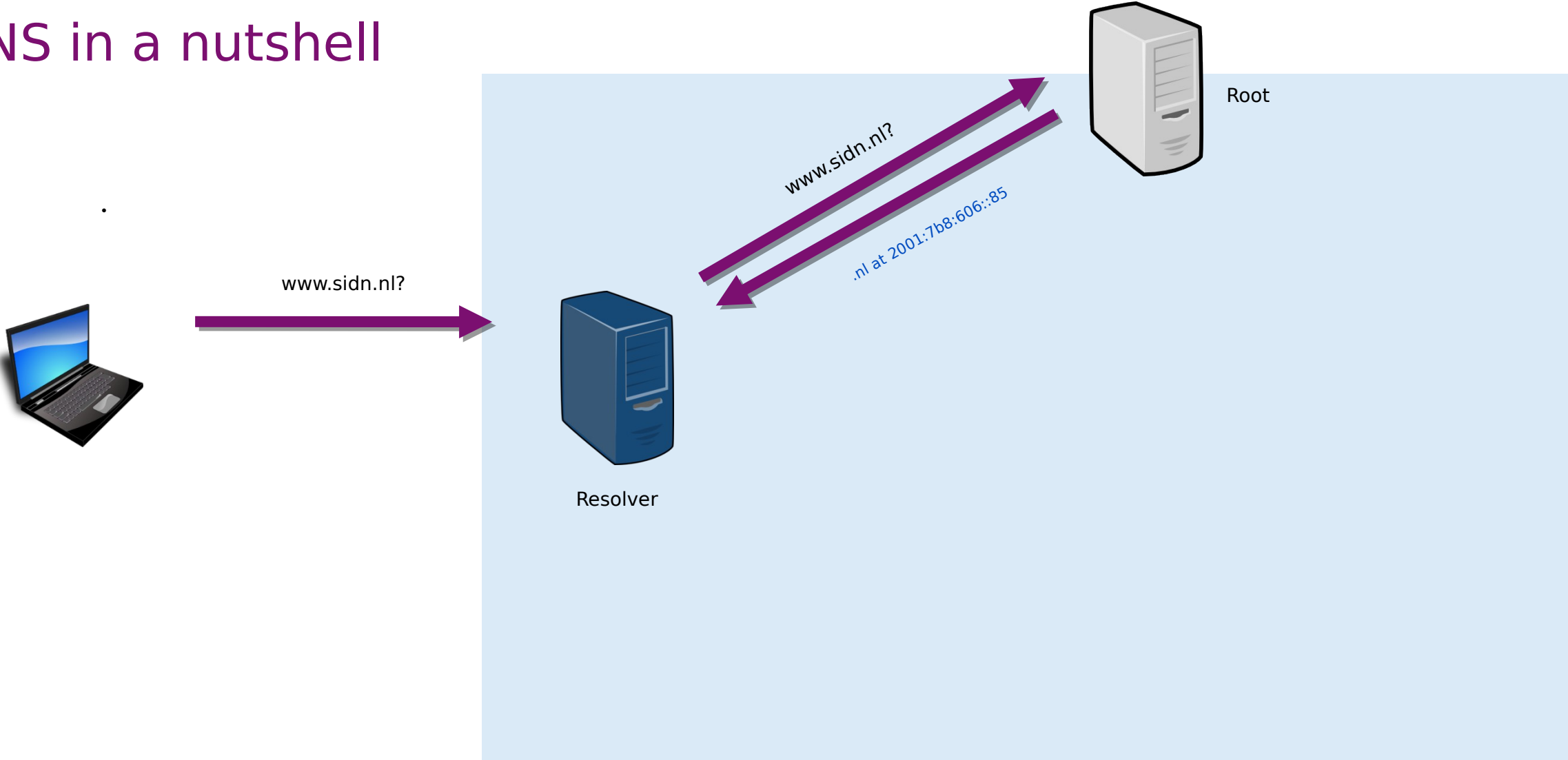
# DNS in a nutshell



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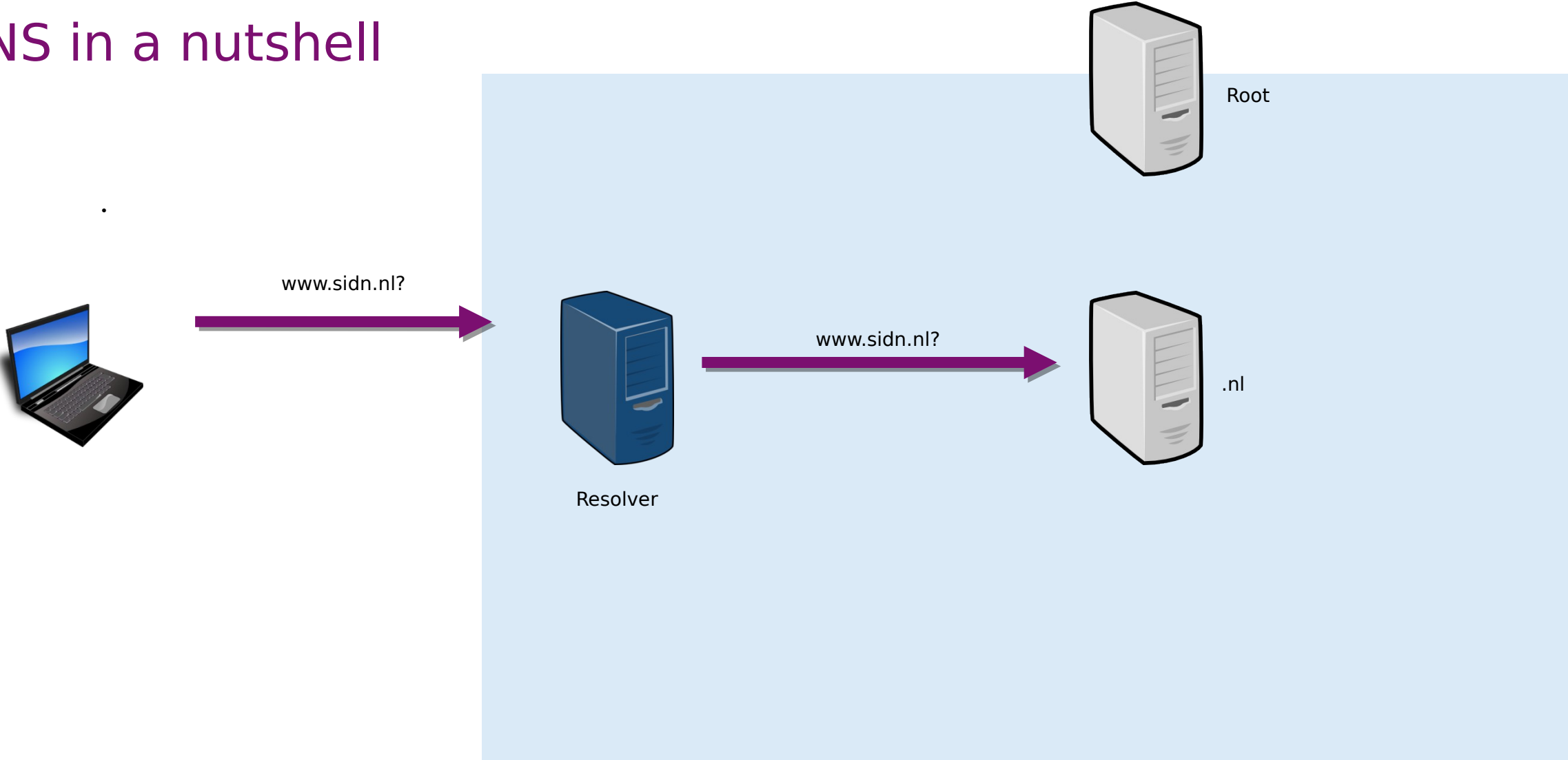


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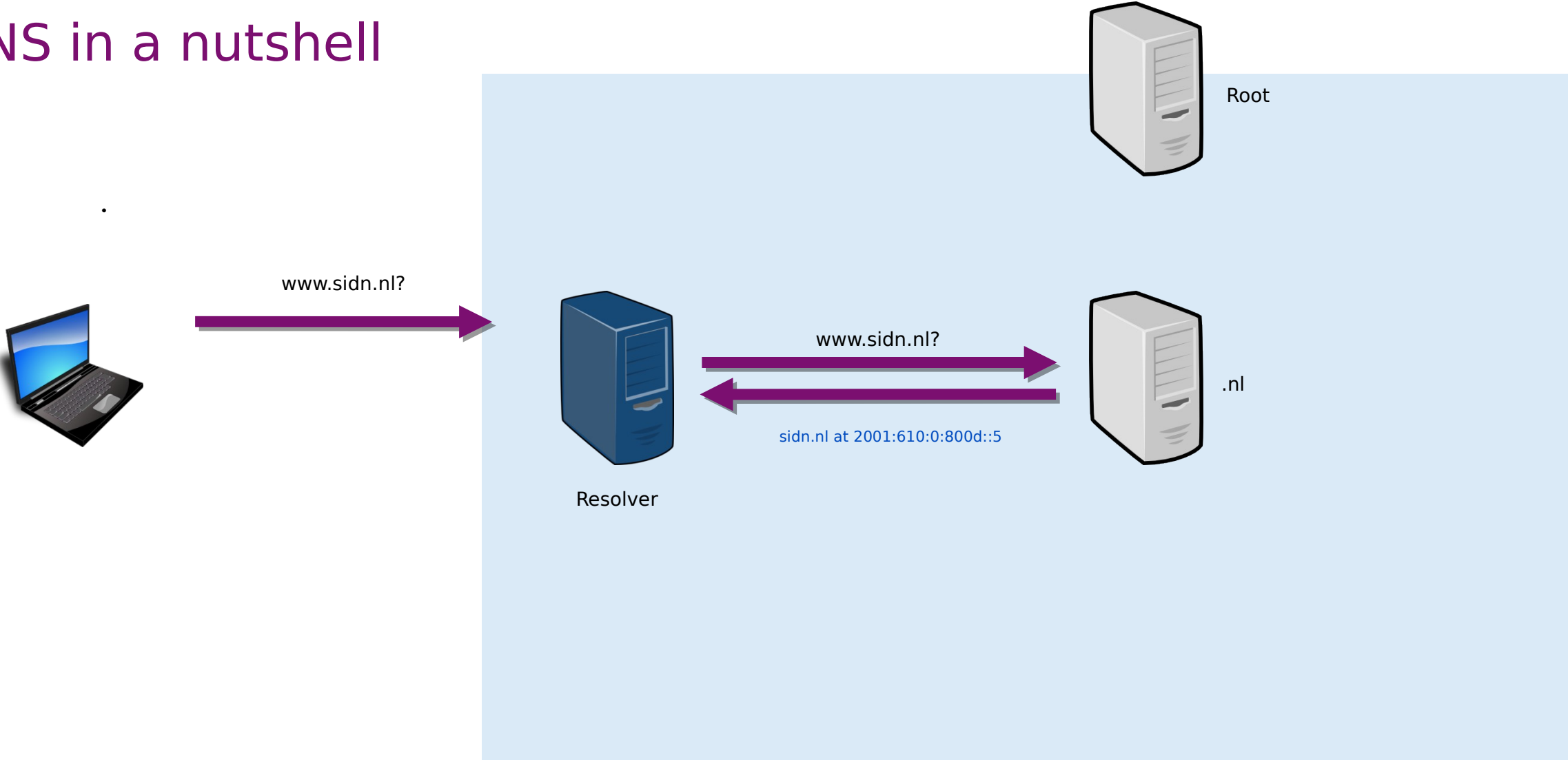




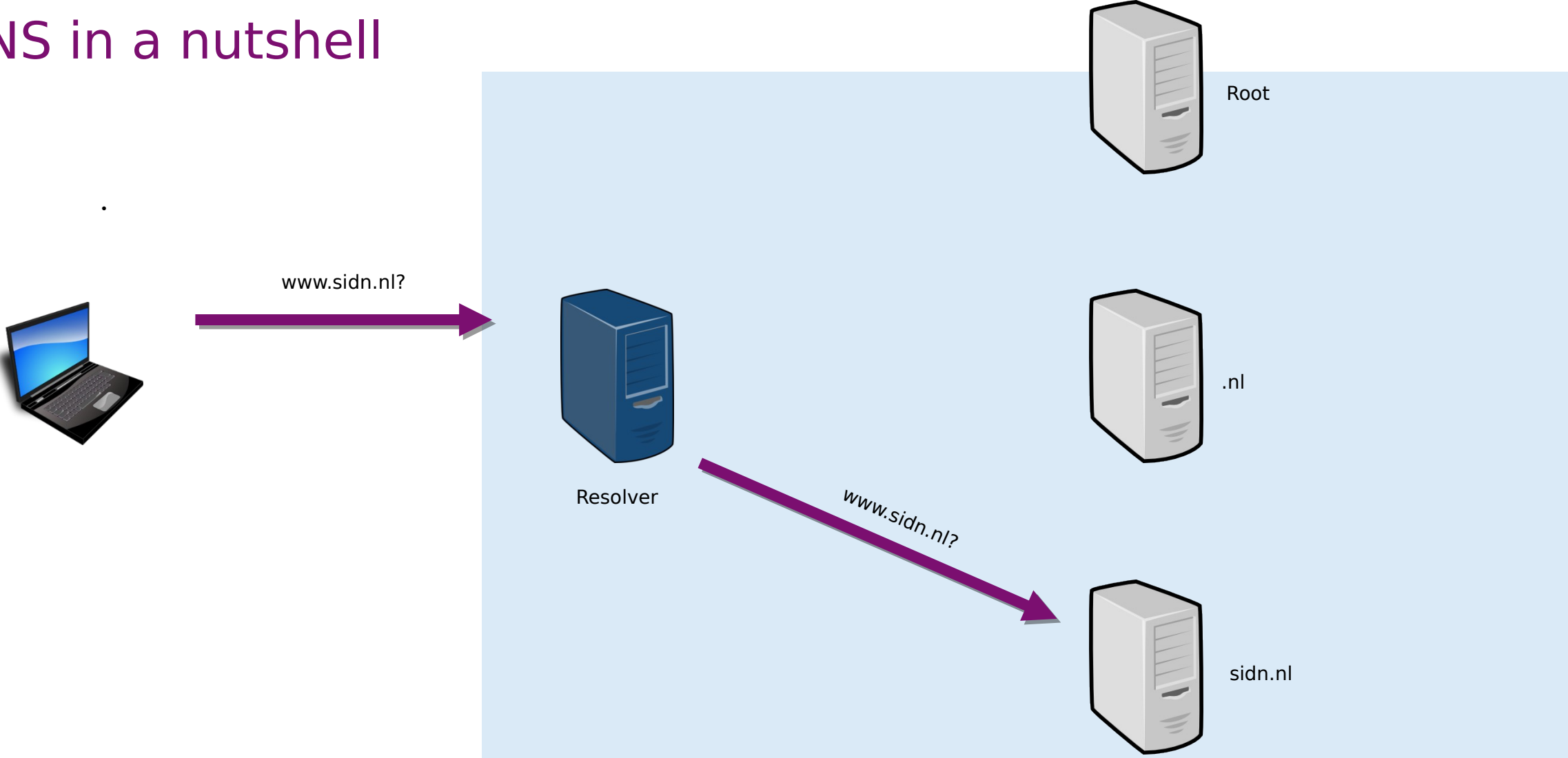
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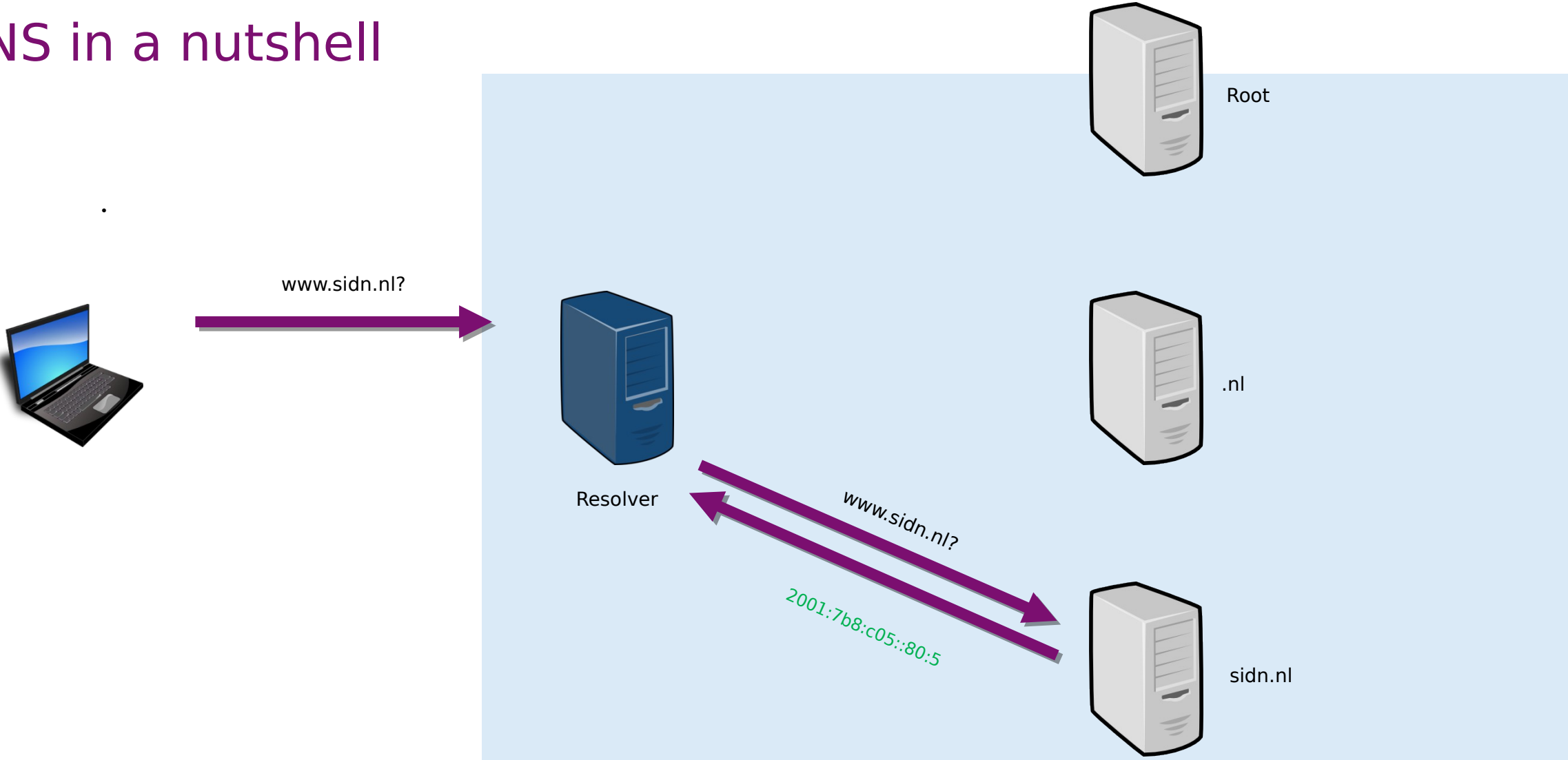
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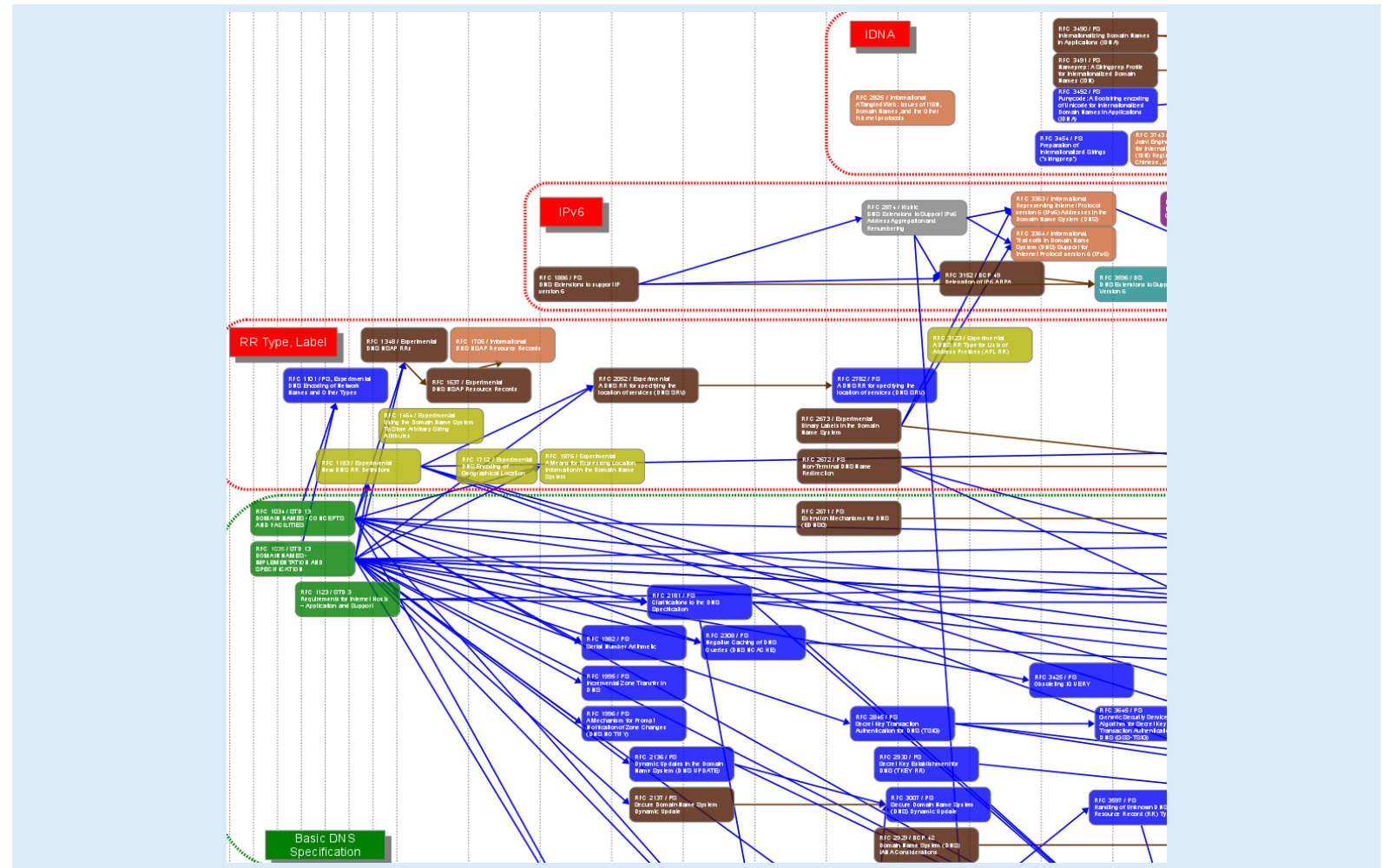
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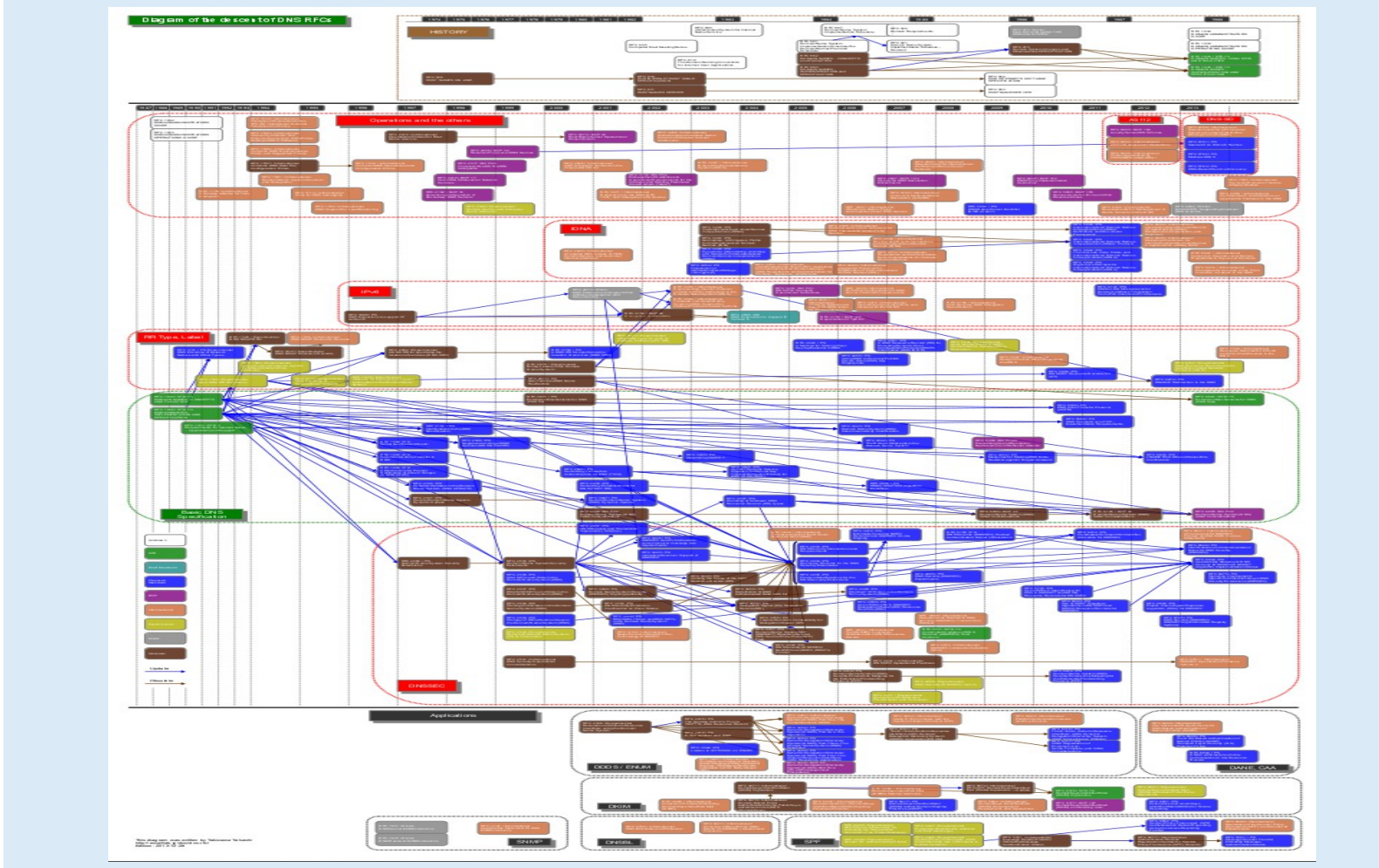
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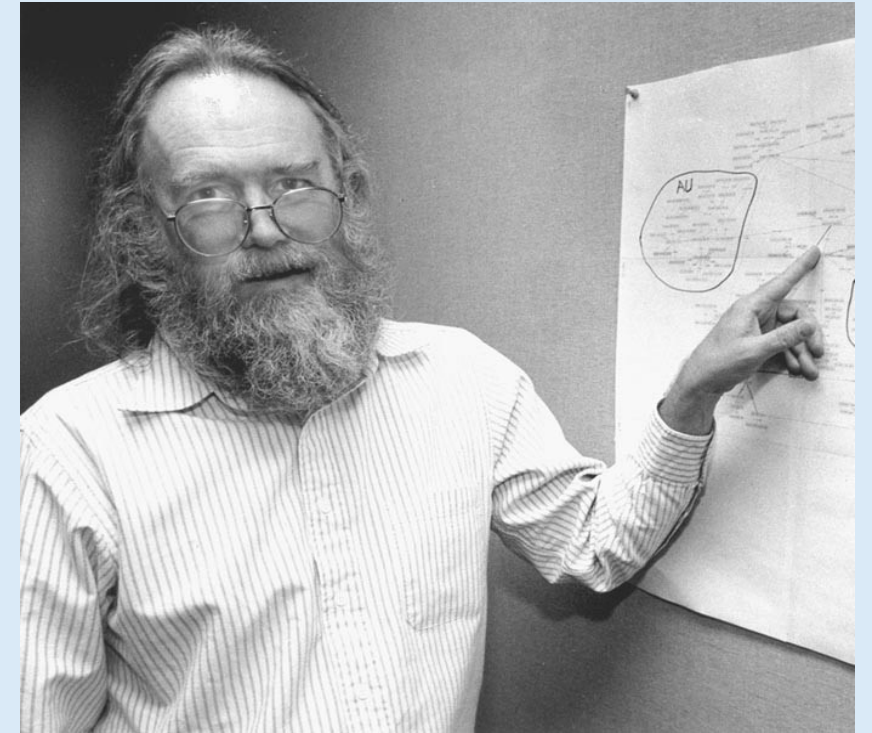
# DNS Specification documents





# A Brief History of DNS

- Initially, all top-level domains maintained by one person; Jon Postel
- ICANN was formed in 1998 under contract of the NTIA (part of the US DoC)
- ICANN maintains zone
- Verisign is technical partner
- Actual servers globally distributed



# A Brief History of .nl

- Delegation awarded to CWI in 1986
- cwi.nl first .nl domain



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Centrum Wiskunde & Informatica

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- Delegation awarded to CWI in 1986
- cwi.nl first .nl domain
- CWI maintained .nl
  - Or really, Piet Beertema did manually
- Domain names free, but not available to everyone



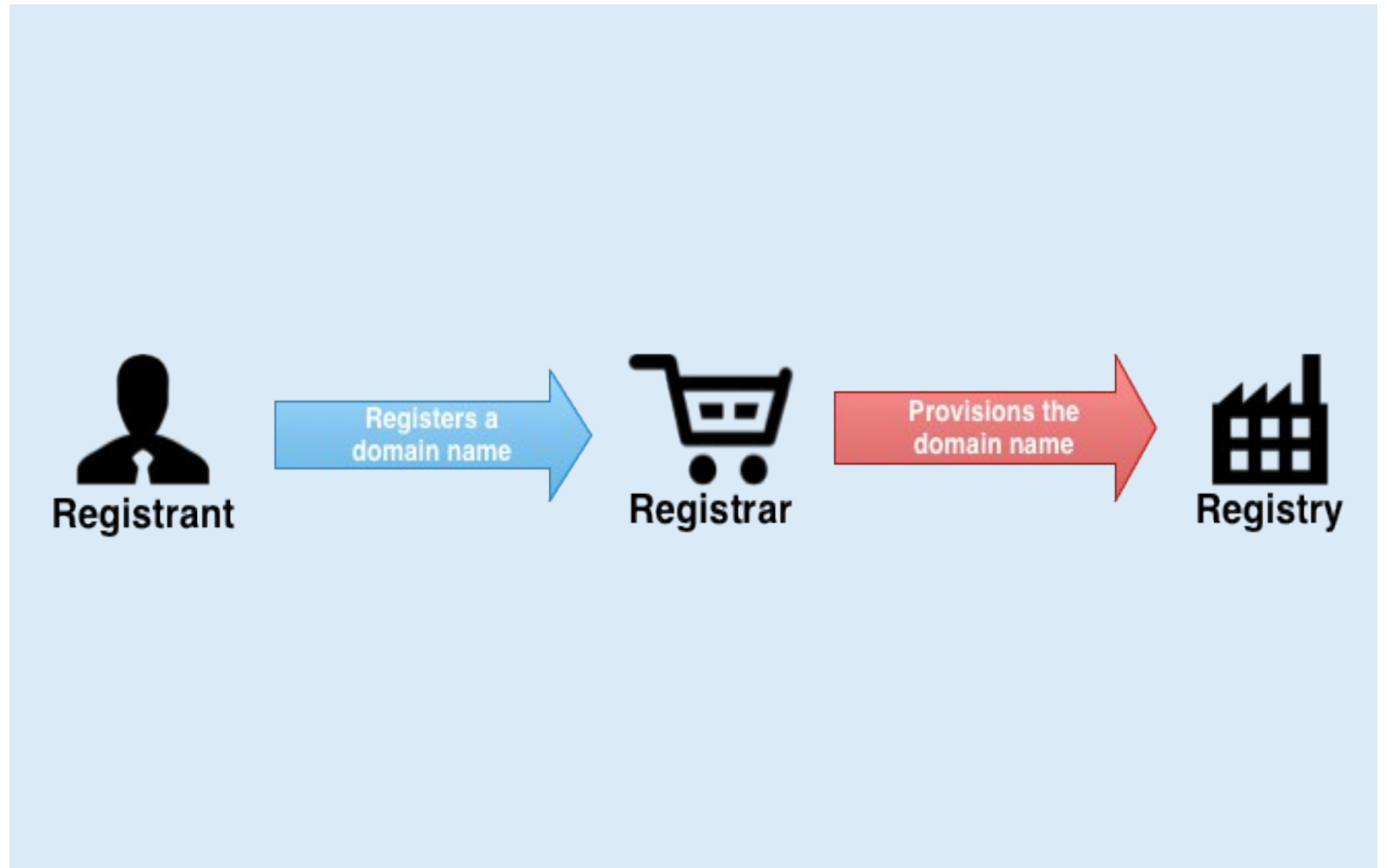
# A Brief History of .nl

- SIDN formed in 1996
- RRR-model put in place
- Needed KvK-number (Dutch Chamber of Commerce) to be eligible for a domain name
- Domain names no longer free



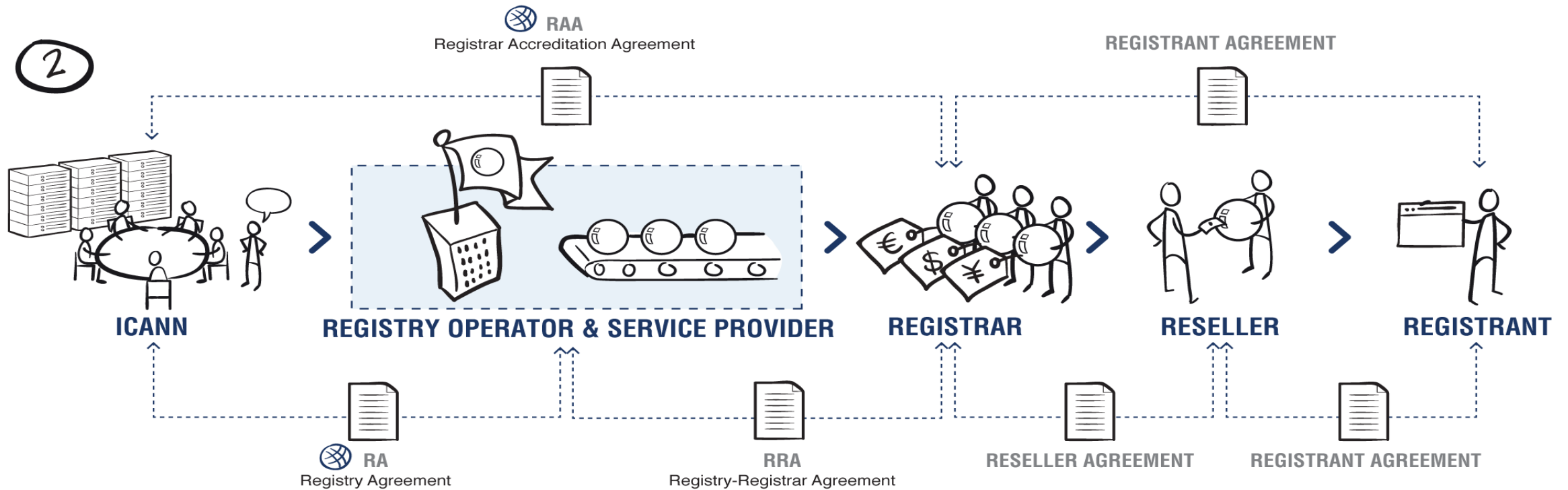
# RRR model

- SIDN does not 'sell' directly



# RRR model

- SIDN does not 'sell' directly





# A Brief History of .nl

- 'Personal domain names' introduced in 2000
- Had to be of the form jelte.123.nl
- Not much interest



# A Brief History of .nl

- Registration opened up in 2003
- But still with RRR model
- Personal Domain Names discontinued in 2006
  - Only about 500 of them



# A Brief History of .nl

- .nl now one of the largest ccTLDs
- 5.4 million domain names
- 1800 registrars



# How to register a (.nl) domain name

- Check whether it is free
- Register it



# How to register a (.nl) domain name

- Check whether it is free
- Register it
- At a registrar



# How to register a (.nl) domain name

- Check whether it is free
- Register it
- At a registrar
- Yearly fee, automatically renewed



# Becoming a registrar

- Any legal person in the EU, except private individuals
- One-time registration fee
- Monthly fee



# Registered Domain Names

- Belong to the registrant ('the domain holder')
- NOT the registrar
- Authority over changes belongs to the holder
- Including moving to other registrar





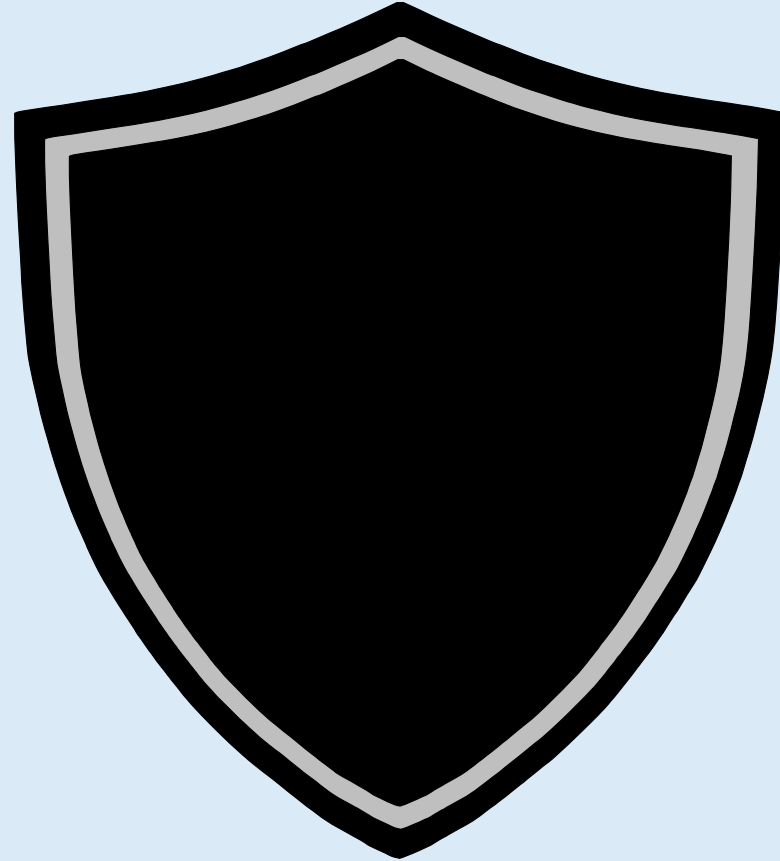
# Registered Domain Names

- Registrar and registrant details available (through 'WHOIS')
- Full details only to other registrars
- Limited details to the general public
- Both have daily access limit



# Protection of registered domains

- **DNSSEC**
  - Cryptographic protection of DNS content
- **.nl Control**
  - Protects against unwarranted changes to your domain
- **DBS**
  - Detects typosquats similar to your domain (e.g. mybank-login.nl for mybank.nl)
  - May also be legit, so we only notify



# Conflicts

- Registrant have obligation not to infringe other's rights
- SIDN does not censor
- SIDN does not play police



# Conflicts (the easy way)

- Low-barrier dispute resolution process, based on ICANN's UDRP
  - Register complaint (at WIPO)
  - Domain is frozen
  - SIDN first mediates
  - If mediation fails, Independent panelist decides



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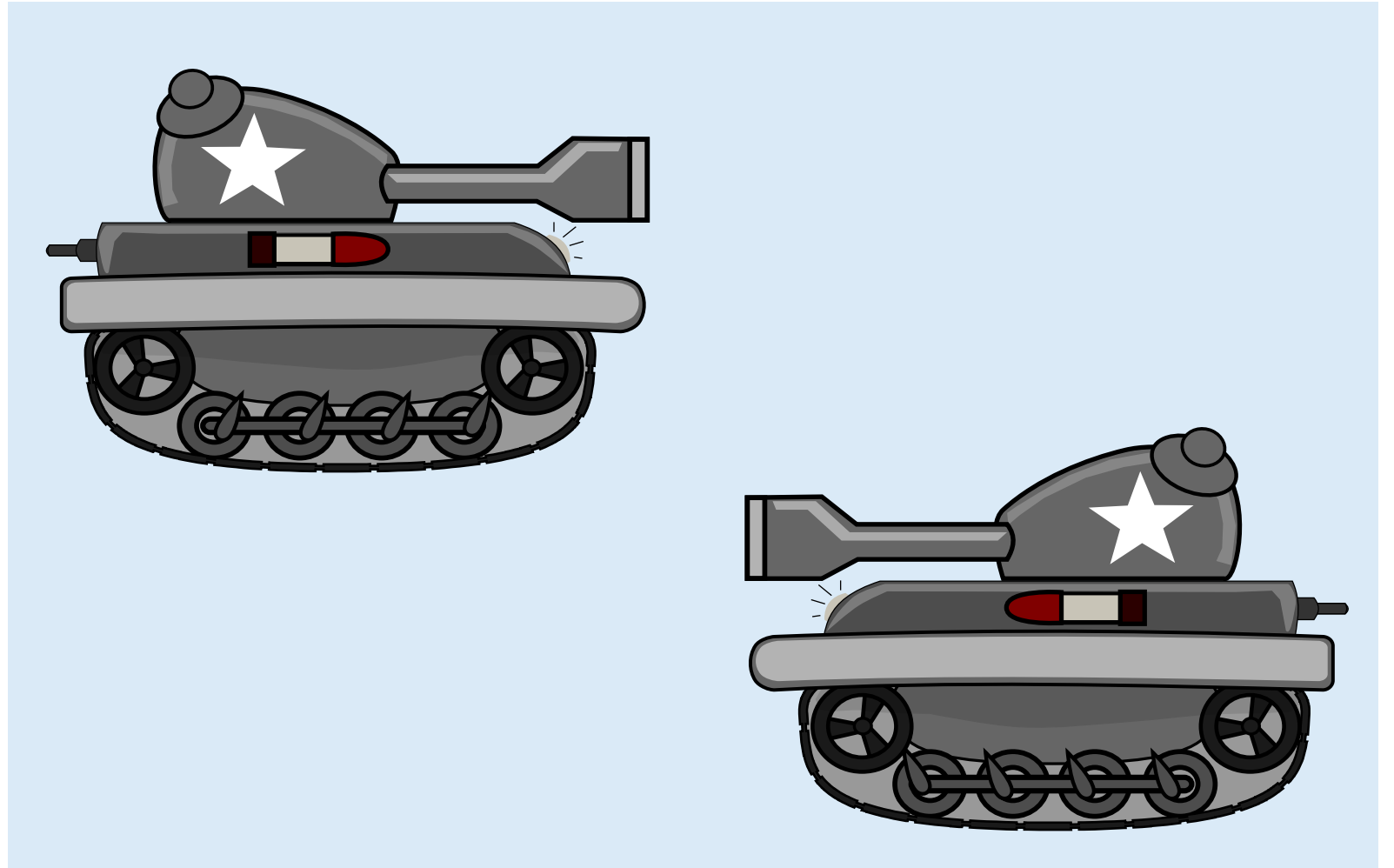
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  - If mediation fails, Independent panelist decides

**UNLESS**



# Conflicts (the hard way)

- Either party can start a court procedure
- SIDN will then not implement panelist's decision
- SIDN will await court's decision



# Cause for complaints

- Name identical or confusingly similar to:
  - Trademark under Dutch law
  - Registered personal name

AND

- No legitimate interest in the name to registrant

AND

- Domain name registered in bad faith



# Cause for complaints

- Bad faith when domain is registered:
  - for sole purpose of selling at a higher price  
OR
  - to deny others' use  
OR
  - to disrupt others' activity  
OR
  - to confuse visitors





# Cause for complaints

- Derived from those rules:
  - Domain is not by itself a trademark violation
  - Domaining (reselling at higher price) is not necessarily done in bad faith



# Rulings overview site

- <http://domjur.nl>
- Overview of past cases
- Dutch only
- Currently 1038 articles
- Maintained together with University of Tilburg

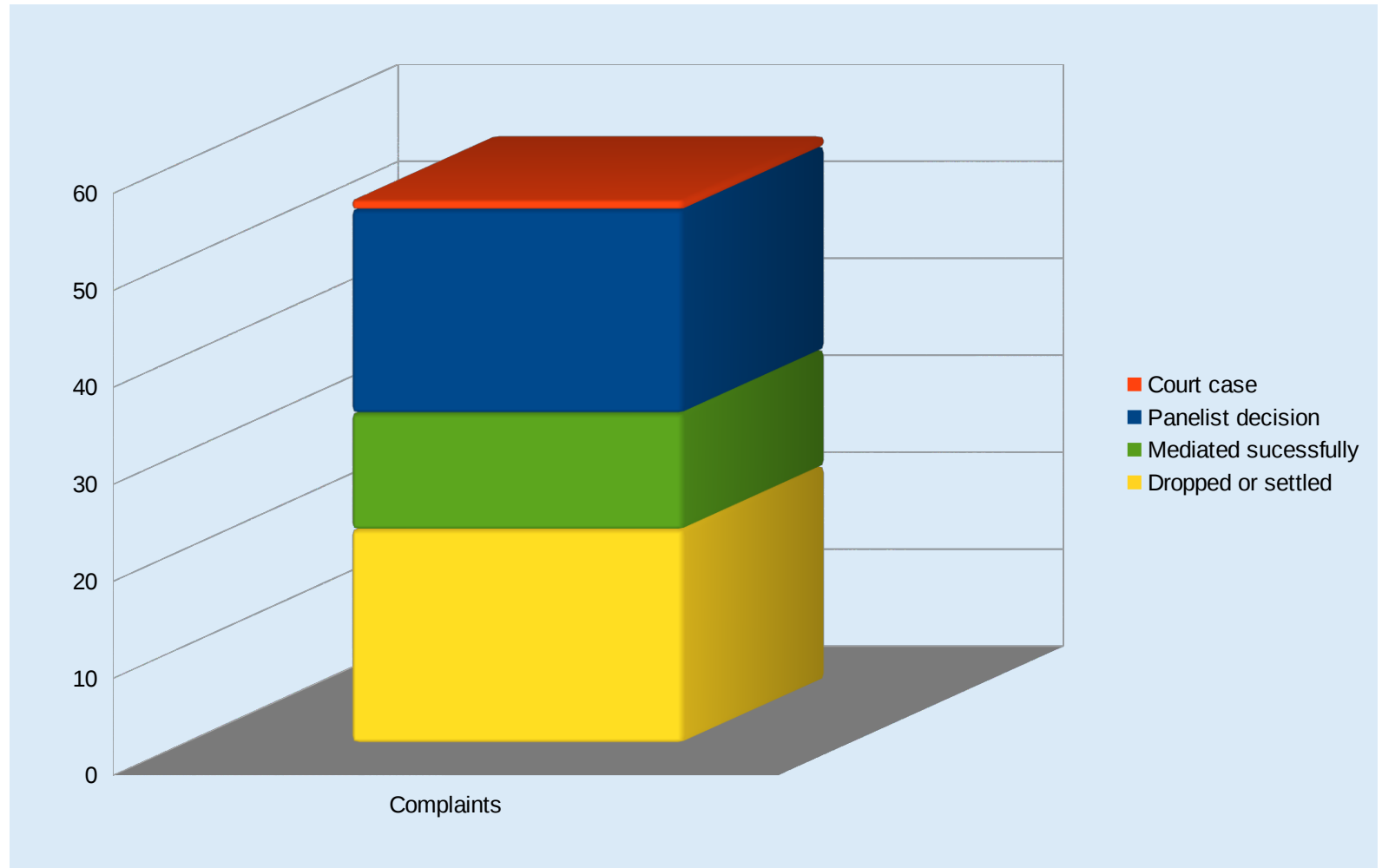


The screenshot displays the website [domjur.nl](http://domjur.nl), which is a Dutch legal database. The browser window shows the URL [www.domjur.nl/topmenu-pages/over-domjur.nl/](http://www.domjur.nl/topmenu-pages/over-domjur.nl/). The website features a blue header with the logo and the text "domjur.nl domeinnaamjurisprudentie". A search bar is prominently displayed with the text "Zoek een uitspraak" and a search button labeled "OK". The navigation menu includes "UITSPRAKEN", "DOSSIERS", "PUBLICATIES", and "STUUR UW UITSPRAAK". The main content area is divided into several sections: "Over domjur.nl" (introduction), "Over SIDN" (SIDN's role in the .nl domain), and "Op twee na grootste landendomein" (SIDN's status as the second largest land domain registrar). The left sidebar lists "UITSPRAAKCATEGORIEËN" (Domain names, Notice-and-Take-Down) and "DOSSIERS" (Recently updated cases, Merk (518), Handelsnaam (317), Gebruik te kwader trouw (48), Geschillenregeling: geen verweer (129), Overige onrechtmatige daad (99)). The right sidebar offers "Stuur uw uitspraak" (Help our database) and "VRAAG & ANTWOORD" (Verklarende woordenlijst, Veel gestelde vragen, Verantwoording).

# Some stats from 2013

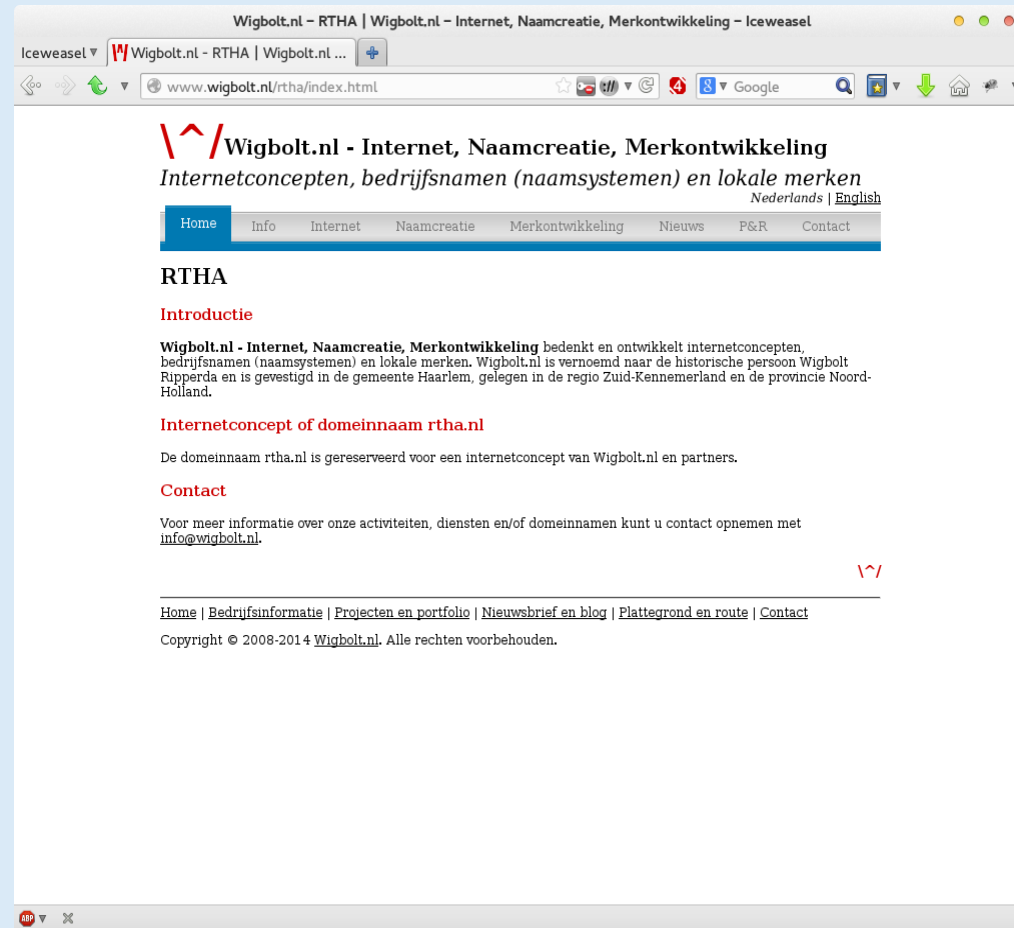
- 65 cases sent to WIPO
- 33 went into mediation
- 12 mediated successfully
- 21 cases went through to resolution process
- 1 went to court after that

(mediation successrate in 2014 so far at 50%)



# Example case

- rtha.nl
- Complainant:  
Rotterdam The Hague Airport
- Complainant owned 'rtha' trade name
- No response from Respondent



The screenshot shows a web browser window displaying the website [www.wigbolt.nl/rtha/index.html](http://www.wigbolt.nl/rtha/index.html). The page title is "Wigbolt.nl - RTHA | Wigbolt.nl - Internet, Naamcreatie, Merkontwikkeling - Iceweasel". The website header includes the logo and navigation menu: Home, Info, Internet, Naamcreatie, Merkontwikkeling, Nieuws, P&R, Contact. The main content area is titled "RTHA" and contains the following text:

**Introdutie**

Wigbolt.nl - Internet, Naamcreatie, Merkontwikkeling bedenkt en ontwikkelt internetconcepten, bedrijfsnamen (naamsystemen) en lokale merken. Wigbolt.nl is vernoemd naar de historische persoon Wigbolt Ripperda en is gevestigd in de gemeente Haarlem, gelegen in de regio Zuid-Kennemerland en de provincie Noord-Holland.

**Internetconcept of domeinnaam rtha.nl**

De domeinnaam rtha.nl is gereserveerd voor een internetconcept van Wigbolt.nl en partners.

**Contact**

Voor meer informatie over onze activiteiten, diensten en/of domeinnamen kunt u contact opnemen met [info@wigbolt.nl](mailto:info@wigbolt.nl).

At the bottom of the page, there is a footer with navigation links: Home | Bedrijfsinformatie | Projecten en portfolio | Nieuwsbrief en blog | Plattegrond en route | Contact, and a copyright notice: Copyright © 2008-2014 Wigbolt.nl. Alle rechten voorbehouden.

# Example case

- rtha.nl
- Complainant:  
Rotterdam The Hague Airport
- Complainant owned 'rtha' trade name
- No response from Respondent
- Conclusion: rtha registered, but not actively used by complainant

The screenshot shows the website for Rotterdam The Hague Airport. The browser address bar displays 'www.rotterdamthehagueairport.nl'. The page features a navigation menu with options like 'HOME', 'BUREN & OMGEVING', 'DE ONDERNEMING', and 'BUSINESS PARK'. A prominent banner advertises 'Ruim 40 bestemmingen snel en gemakkelijk bereikbaar' (Over 40 destinations quickly and easily accessible). Below this, there is a section for 'AANMELDEN NIEUWSBRIEF' (Sign up for newsletter) and a navigation bar with links for 'VOOR VERTREK', 'VLUCHTINFORMATIE', 'OP DE LUCHTHAVEN', 'BEREIKBAARHEID & PARKEREN', and 'ZOEK EN BOEK'. The main content area includes a flight schedule table, a map of destinations, and a section for parking information.

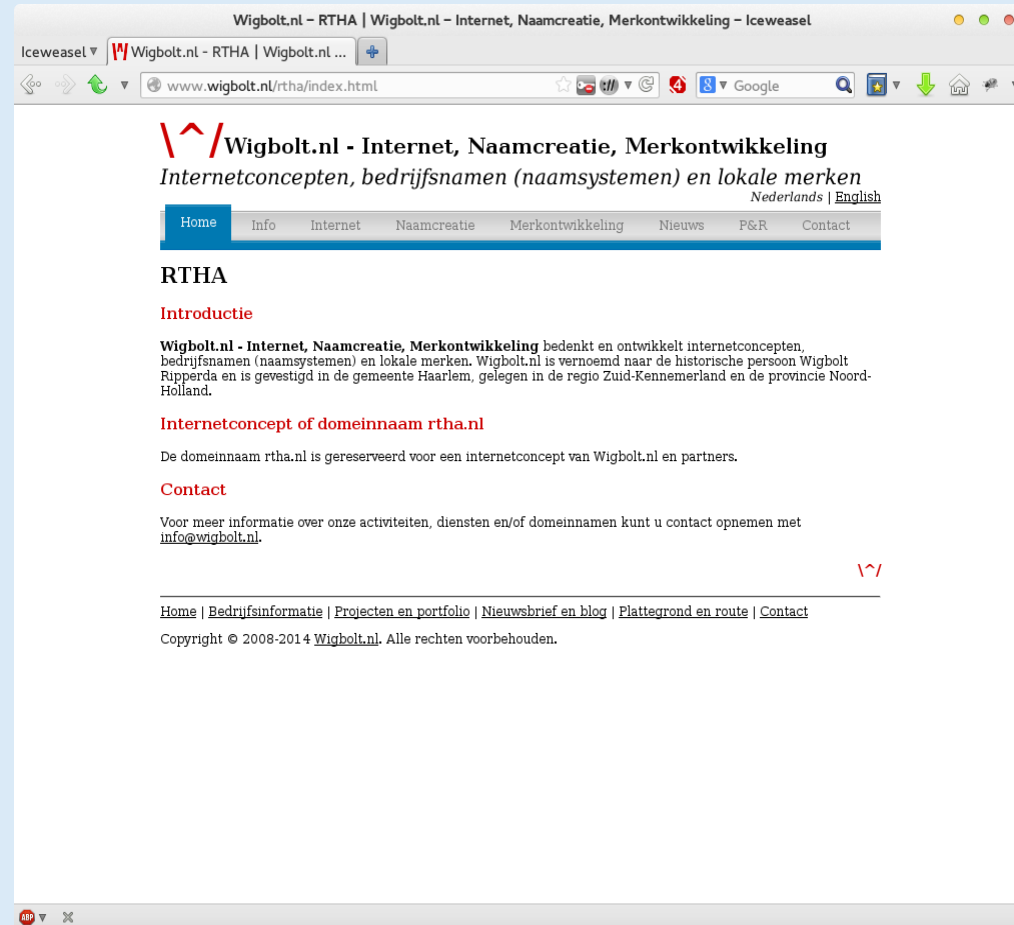
VERTREKKEN:		AANKOMSTEN	
Vlucht	Luchthaven	Gepland	Verw./Status
LH-2317	München	19:50	19:56 vertrokken
HV-5287	Praag	19:30	20:35 vertrokken
BA-415	London Heathrow	20:50	20:50 boardend
AA-6753	London Heathrow	20:50	20:50 boardend
WX-070	London City	07:00	07:00

**Ruim 40 bestemmingen bereikbaar vanaf Rotterdam The Hague Airport**

**MEDEDELINGEN:**  
**Parkeerterreinen:**  
De parkeerterreinen op Rotterdam The Hague Airport (P1, P1A, P2, P3 en P7) zijn de officiële parkeerterreinen van Rotterdam The Hague Airport op loopafstand van de terminal. Via deze website kunt u uw parkeerplaats op deze terreinen reserveren. Het gebruik maken van eventueel aangeboden Valet Parkeerservice of andere parkeerfaciliteiten waarbij uw auto buiten de parkeerterreinen van Rotterdam The Hague Airport wordt geparkeerd geschiedt altijd geheel voor uw eigen risico! [Lees meer](#)

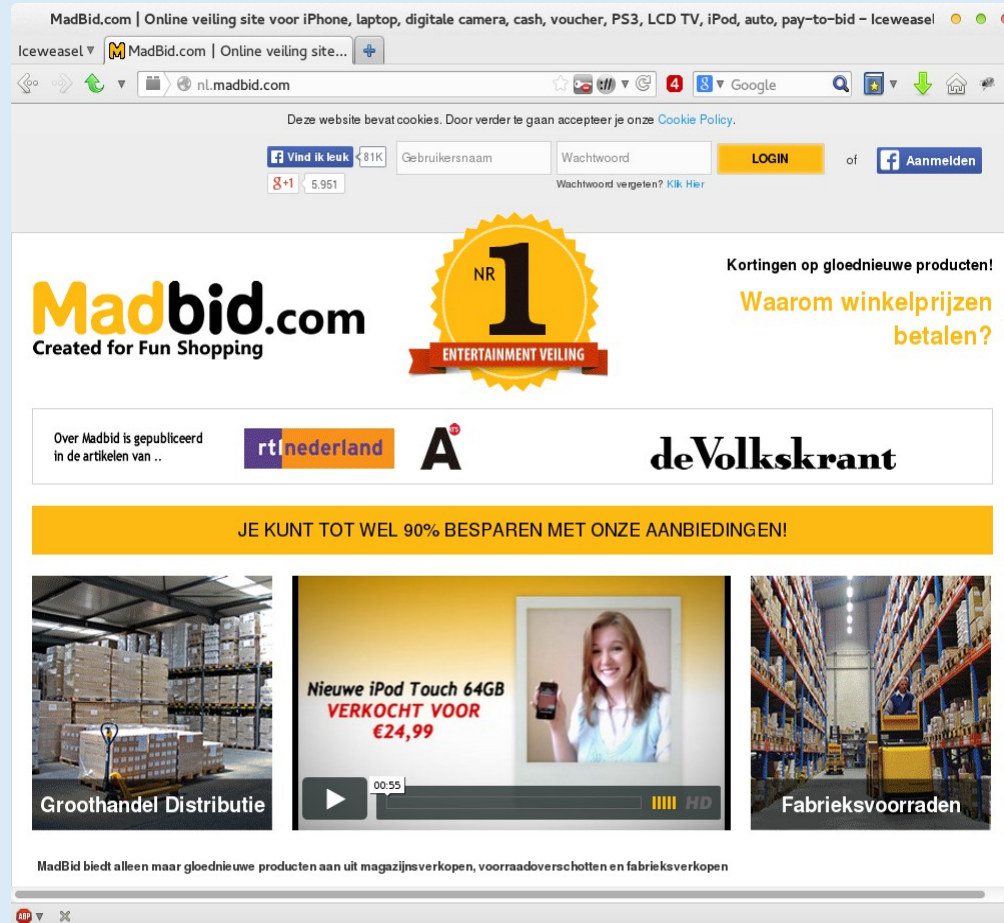
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- Complaint found baseless



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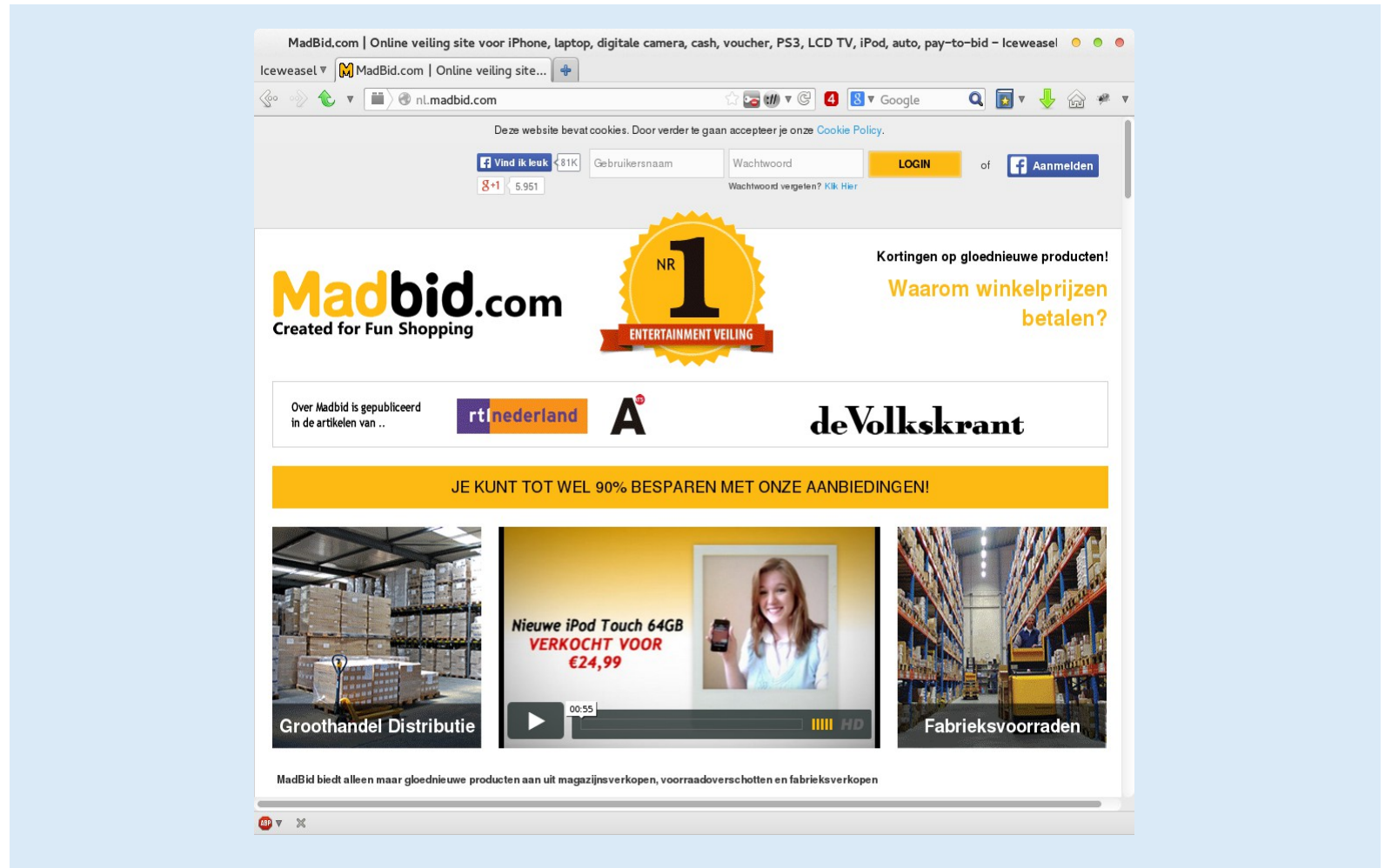
- madbid.nl
- Complainant:  
Person owning MADBID mark
- No response from Respondent
- Conclusion:
  - Trademark in use (before registration of domain)
  - No legitimate interest by respondent
  - Respondent active in same field





# Example case

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- Complainant:  
Person owning MADBID mark
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  - No legitimate interest by respondent
  - Respondent active in same field
- Complaint granted





# Example case

- [www.112.nl](http://www.112.nl)
- Complainant:  
Dutch state
- Respondent owned 'www.112'  
personal domain name
  - i.e. his 'name' was 'www'



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Dutch state
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- No legitimate interest, State's  
interest overrule in this case



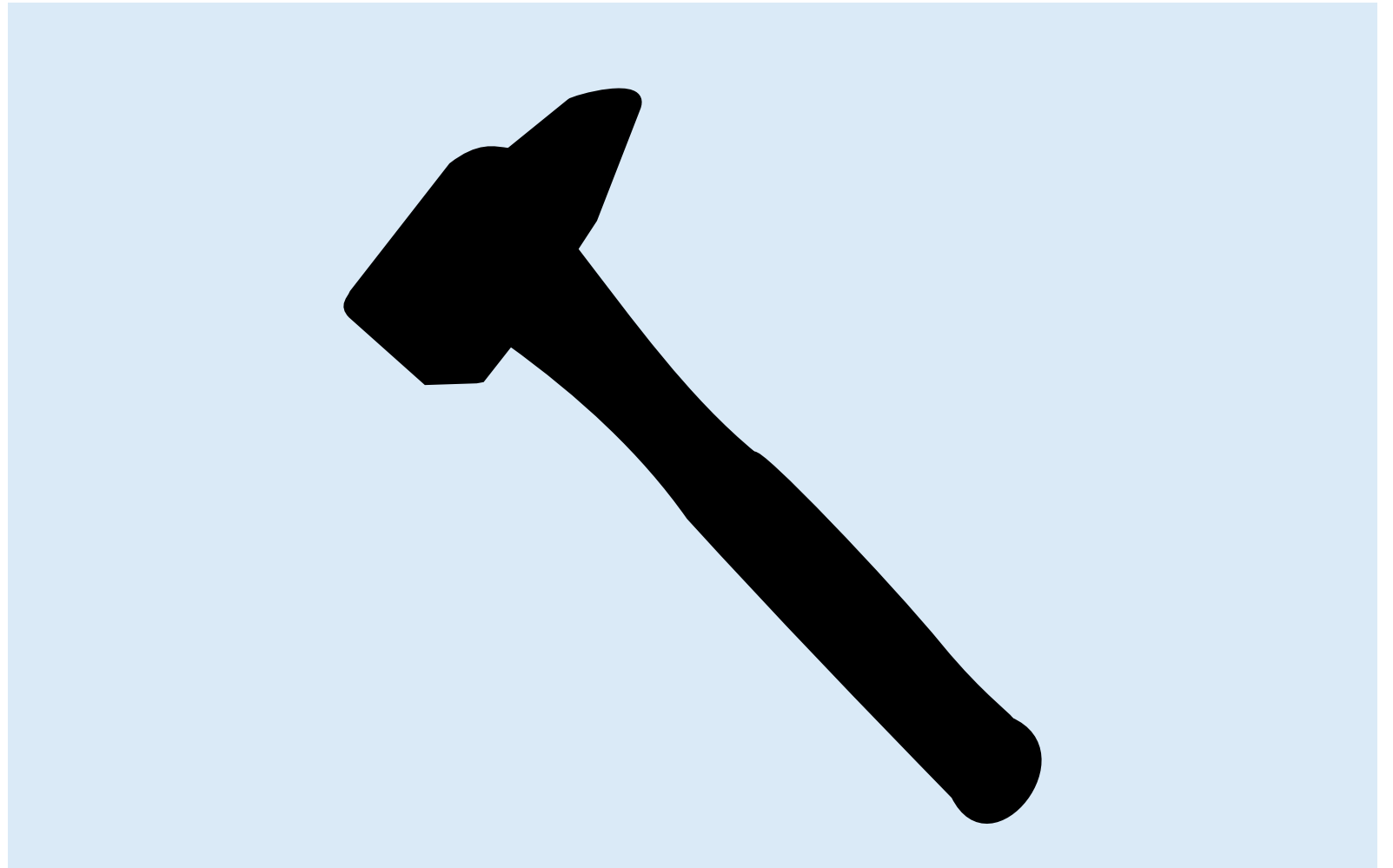
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# Other types of complaints

- Fraud & Abuse
- Generally not on the level of the domain itself
- SIDN can't shut down a domain
- We either:
  - Refer to registrar
  - provide info (to specific parties, e.g. inspection for health care)
- Notice & Takedown last resort



# That's all!

- Go check out <http://domjur.nl>
- And or <https://www.sidn.nl/en/disputes-and-complaints/>
- Or be one of the 5 million nice and happy .nl-people ;)



# Questions?

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