

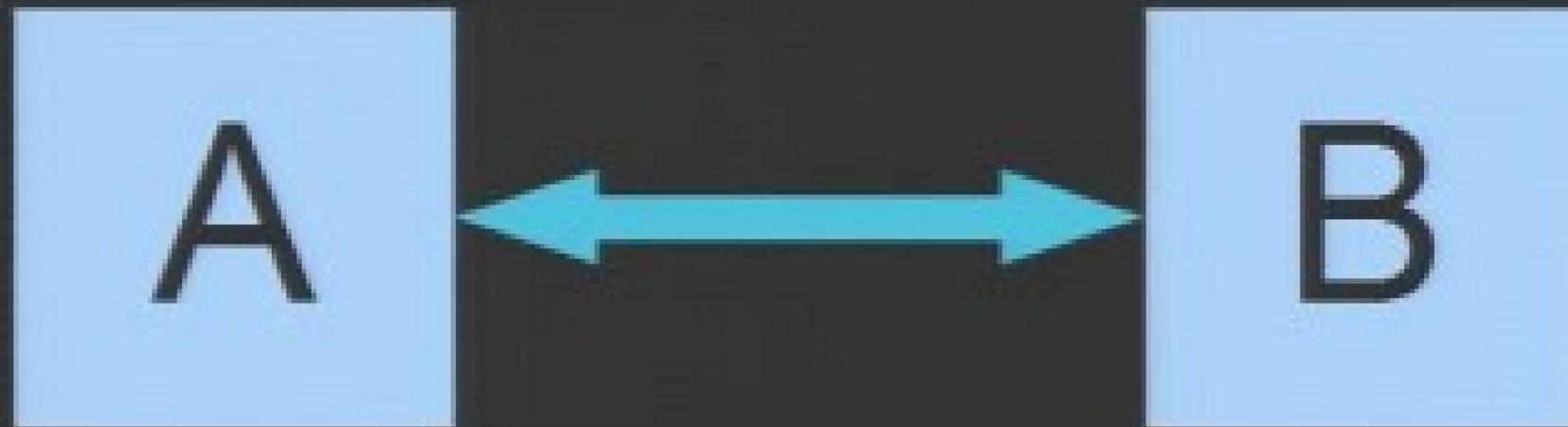
# Torservers – Scaling the Tor network



Moritz Bartl

moritz@torservers.net  
<https://www.torservers.net/>

Anonymous communication  
!= anonymous speech !



# Reminder: Declaration of Human Rights

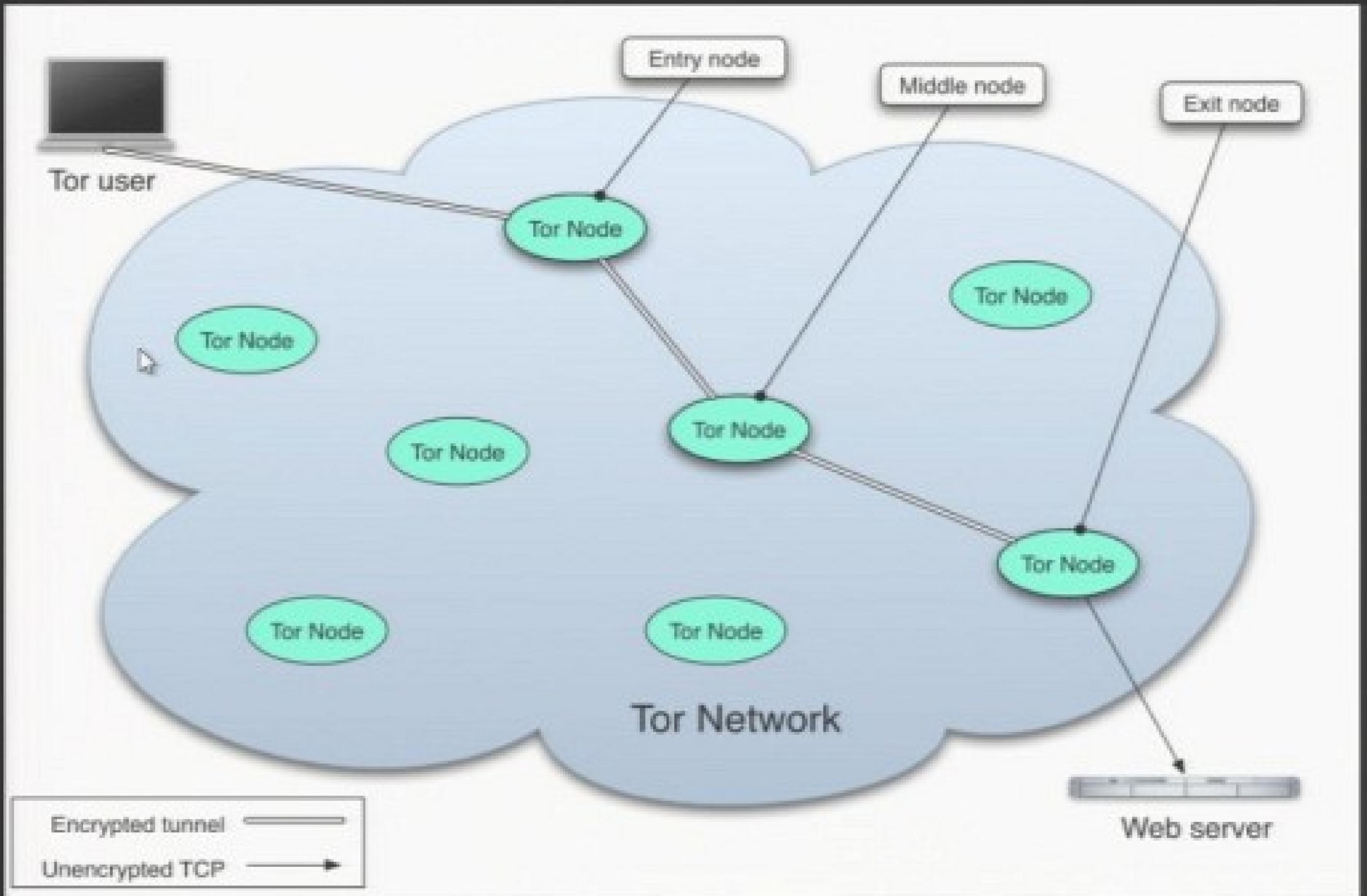
- Article 19.

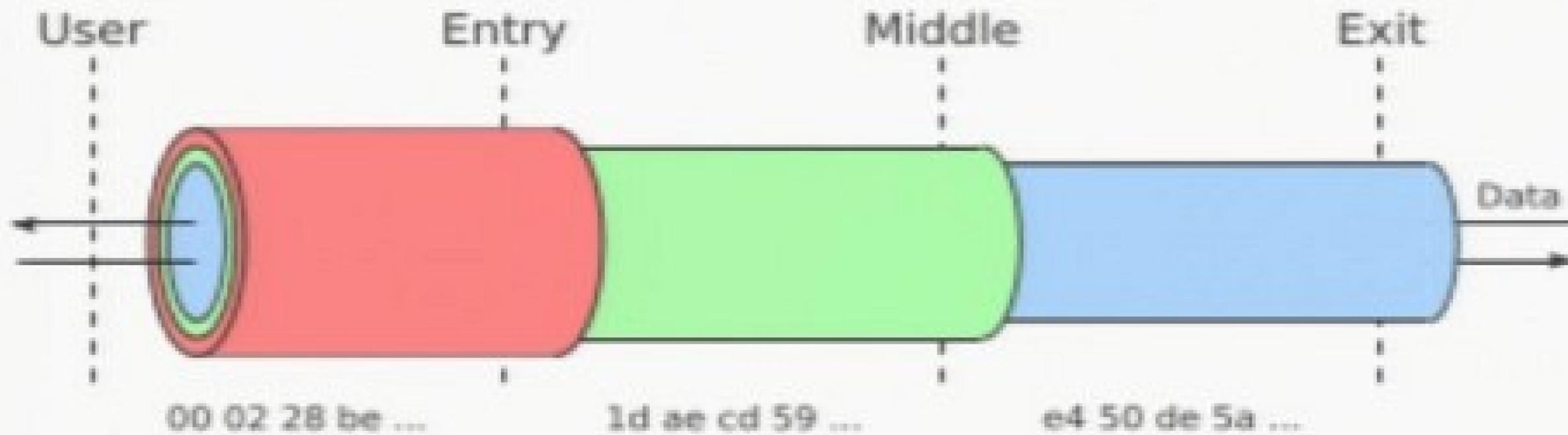
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# Tor



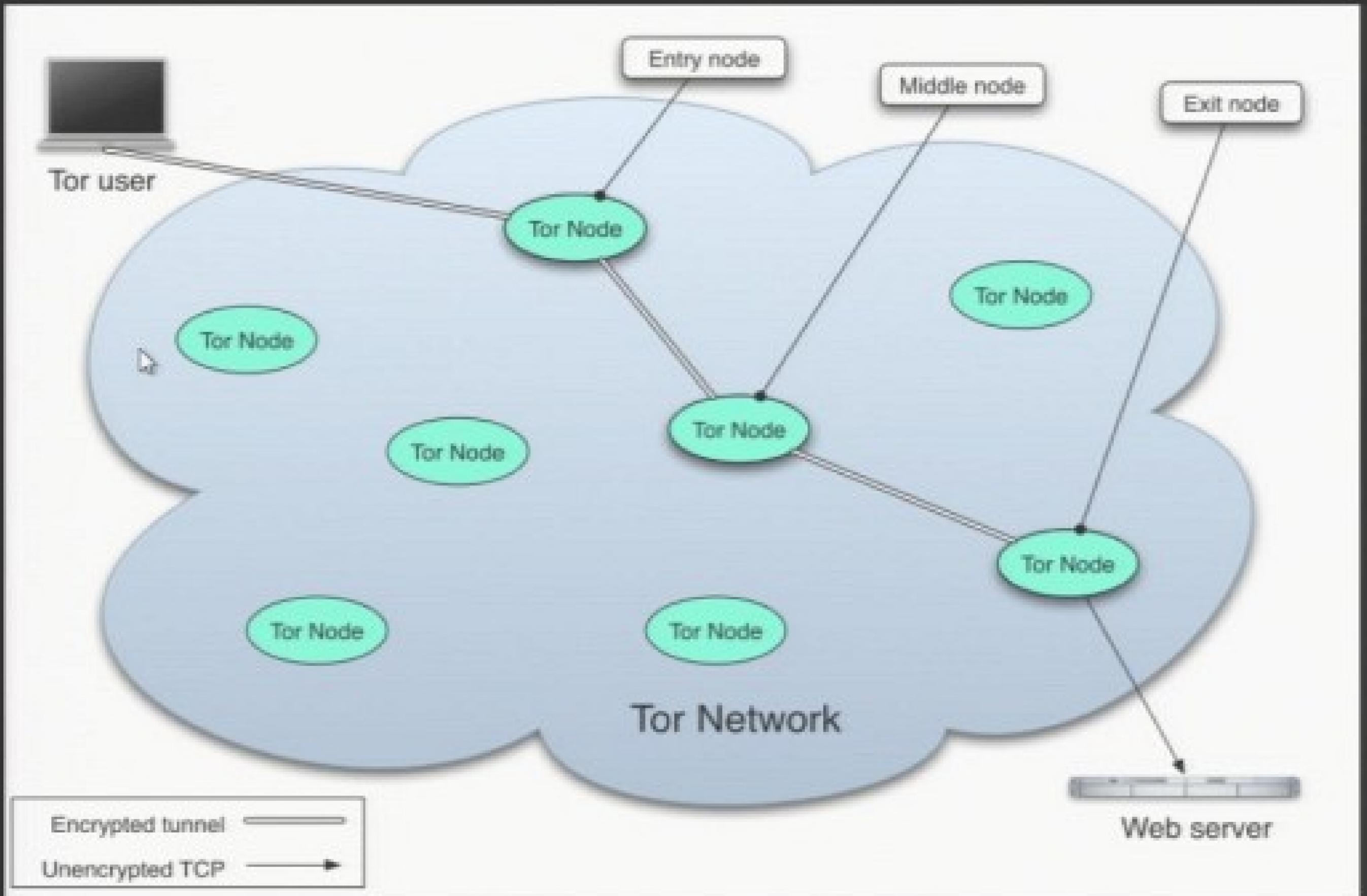


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Diagram: Robert Watson

Telescope → Onion Routing

# Tor



# Tor network



Aug 2013: ~2700

# Tor network



**270 Exit Relays > 1 MB/s**

#	Consensus Weights	Advertised Bandwidth	Guard Probability	Middle Probability	Exit Probability	Nickname	Fingerprint	Exit	Guard	Country
1	28.5588%	32.9768%	27.2593%	28.3167%	30.1004%	*	(1107 relays)	(207)	(371)	US
2	7.4156%	6.1929%	5.5495%	4.8416%	11.8563%	*	(142 relays)	(39)	(55)	SE
3	9.6007%	8.7740%	9.2622%	8.1481%	11.3920%	*	(209 relays)	(71)	(86)	NL
4	4.8423%	3.2132%	2.9111%	2.9085%	8.7078%	*	(59 relays)	(26)	(26)	CH
5	7.2594%	6.0428%	6.1912%	7.1510%	8.4361%	*	(242 relays)	(72)	(76)	FR
6	17.7908%	16.7376%	22.7157%	23.5239%	7.1315%	*	(767 relays)	(119)	(267)	DE
7	3.5847%	2.8492%	2.3684%	3.3324%	5.0535%	*	(171 relays)	(29)	(40)	GB

( <https://compass.torproject.org/> )

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6	3.1233%	2.2638%	3.3838%	3.7204%	2.2656%	*	(102 relays)	(15)	(30)	CA
7	3.1057%	1.9541%	3.3192%	2.4862%	3.5118%	*	(29 relays)	(11)	(11)	RO

( <https://compass.torproject.org/> )

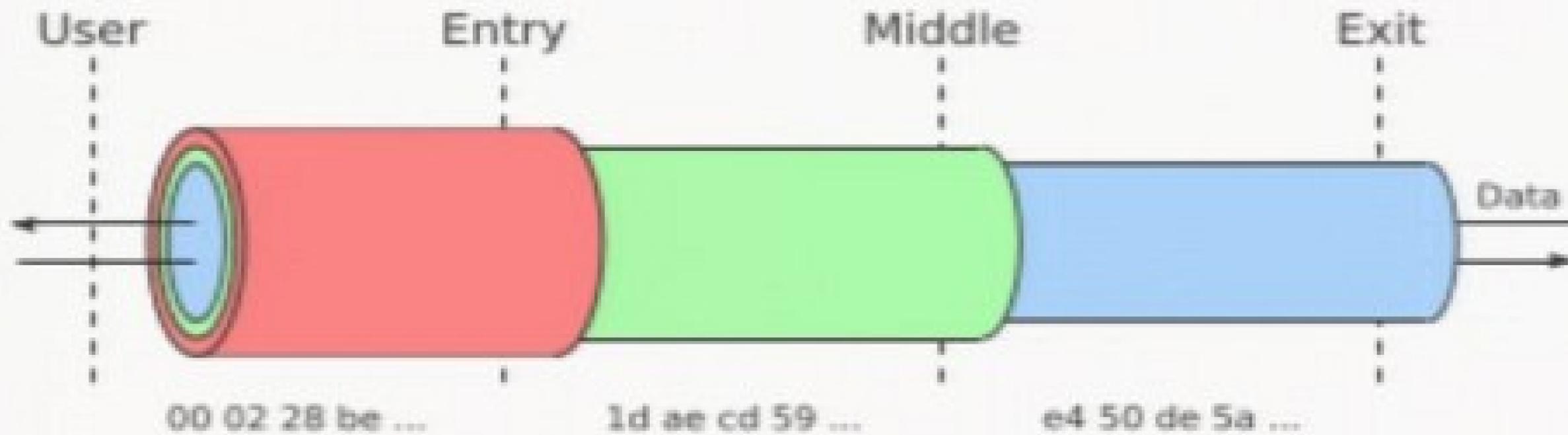


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Telescope → Onion Routing



# Tor network



Aug 2013: ~2700

# Tor network



**270 Exit Relays > 1 MB/s**

# Torserver.net

- turning donations into exit bandwidth since 2010
- 2011: registered first German non-profit  
Zwiebelfreunde e.V. (“Friends of the Onion”)

→ success!

started “franchising” the concept

# Torserver.net today

Independent organizations in

- Canada [www.koumbit.org](http://www.koumbit.org)
- France [www.nos-oignons.net](http://www.nos-oignons.net)
- Germany [www.zwiebelfreunde.de](http://www.zwiebelfreunde.de)
- Iceland [www.icetor.is](http://www.icetor.is)
- Sweden [www.dfri.se](http://www.dfri.se)
- Switzerland [www.privacyfoundation.ch](http://www.privacyfoundation.ch)
- Luxembourg [www.enn.lu](http://www.enn.lu)
- Netherlands [www.hartvoorinternetvrijheid.nl](http://www.hartvoorinternetvrijheid.nl)
- USA: NoiseTor, Access, Calyx Institute

<https://www.torserver.net/partners.html>

# Torserver.net activities

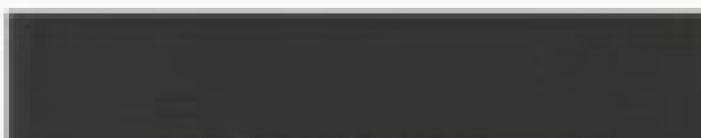
- Help the Tor relay community
- Distribute donations and acquire grants
  - <https://www.torserver.net/wiki/donations>
  - (2011: 2250€ // 2012: 26,260€ // 2013: >17k€)
  - 3,929€ Crowdfunding Campaign 2013
  - \$10,000 Access grant
  - 10,000€ Wau Holland Foundation grant
  - ~\$100k Broadcasting Board of Governors (via Torproject, Inc.)
  - **\$250,000 for 2yrs from Digital Defenders Fund**

# Planned for this year

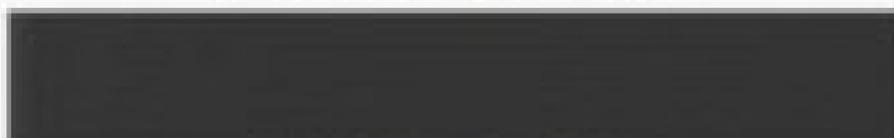
- **develop easy-to-deploy Tor relay setup packages**
  - **Multi-platform**
  - **Hardened**
  - **Configuration wizard**
  - **Monitoring and statistics**



Stinks (S)



CT SIGDEV



JUN 2012

Derived From: NSA/CSSM 1-52  
Dated: 20070108  
Declassify On: 20370101

# Tor Stinks... (U)

- We will never be able to de-anonymize all Tor users all the time.
- With manual analysis we can de-anonymize a very small fraction of Tor users, however, no success de-anonymizing a user in response to a TOPI request/on demand.

# Contact



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[www.torservers.net](http://www.torservers.net)

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