



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

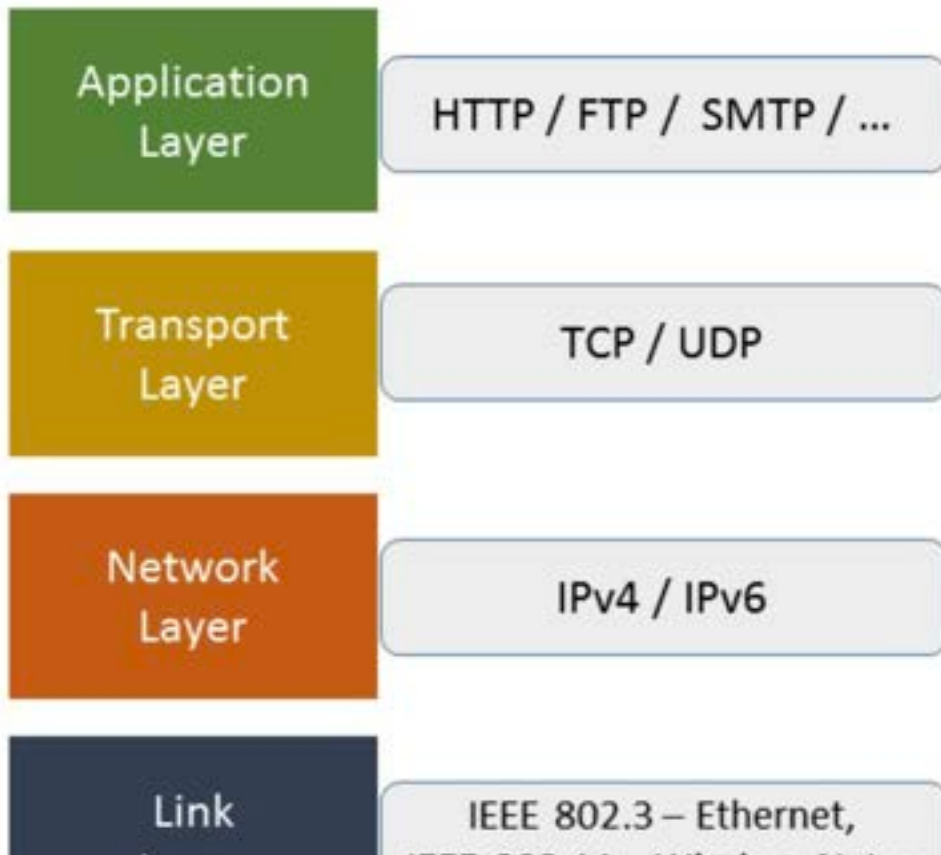
Greening RIPE through Activism and Empathy

Bits & Bäume, Berlin | 1st October 2022

Vesna Manojlovic
Senior Community Builder
BECHA@ripe.net

*Internet Governance &
Environmental
Sustainability*

TCP-IP & NVC



<https://fineartamerica.com/featured/nvc-observation-feelings-needs-request-heidi-hanson.html>

Non-Violent Communication & TCP-IP Protocol Stack



- Observations
- Feelings
- Needs
- Requests
- Application Layer
- Transport Layer
- Network Layer
- Physical / Link Layer

Greening RIPE through (h)Activism & Empathy



- **Observations**

- RIPE is part of Internet Governance power structures
- Climate Crisis is impacting internet infrastructure / “Data is the New Oil”

- **Feelings**

- Climate Grief, Climate Anxiety... and some hope
- Curiosity about adjacent communities & frustration by slow actions in RIPE

- **Needs**

- Awareness; responsibility; Help, support, solidarity, contribution; JEDI

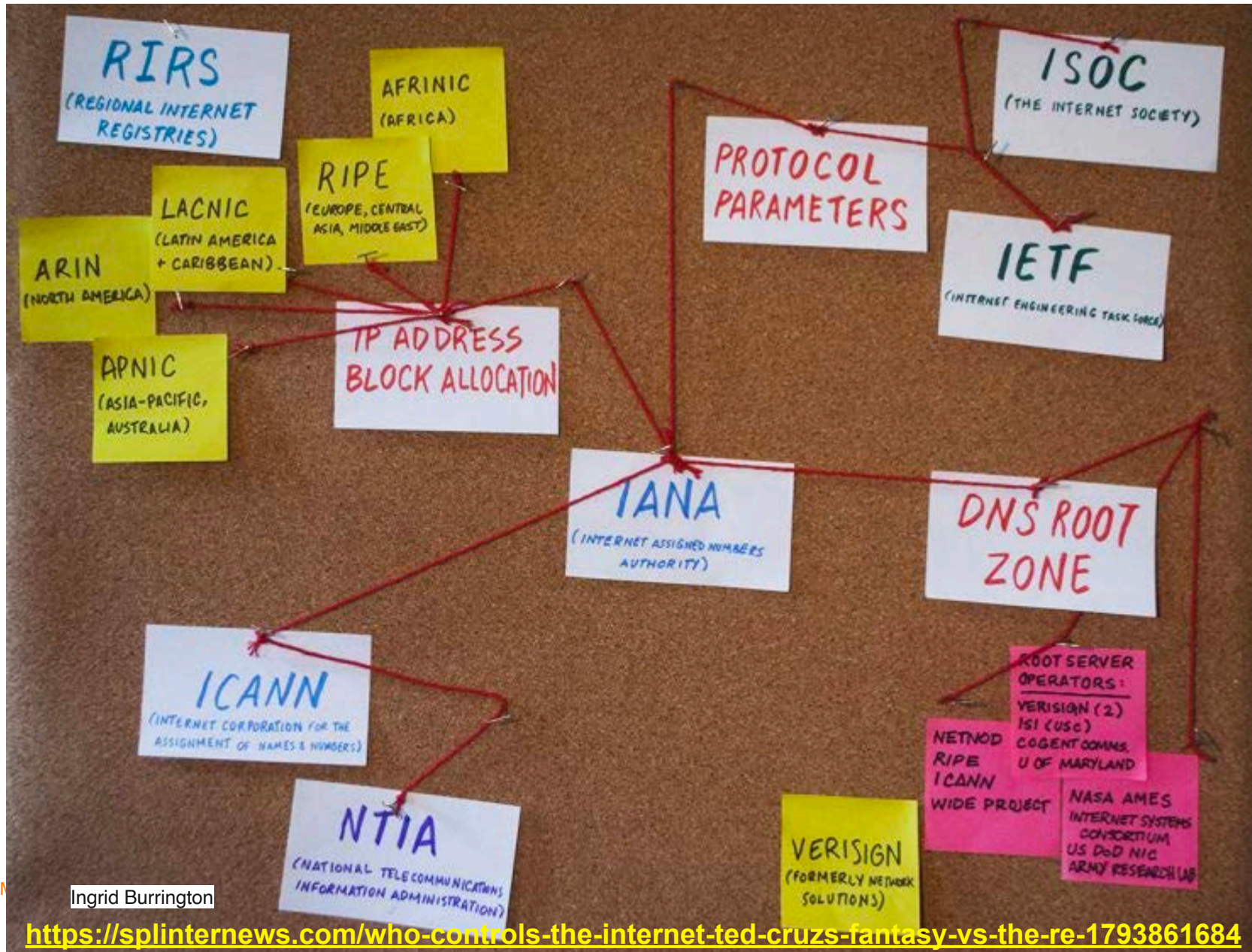
- **Requests / Offers**

- please join our community, & invite us to work on this together!



Internet Governance & Climate Crisis

- RIPE is part of Internet Governance power structures
- Climate Crisis is impacting internet infrastructure / “Data is the New Oil”



Vesna M

Ingrid Burrington

<https://splinternews.com/who-controls-the-internet-ted-cruzs-fantasy-vs-the-re-1793861684>

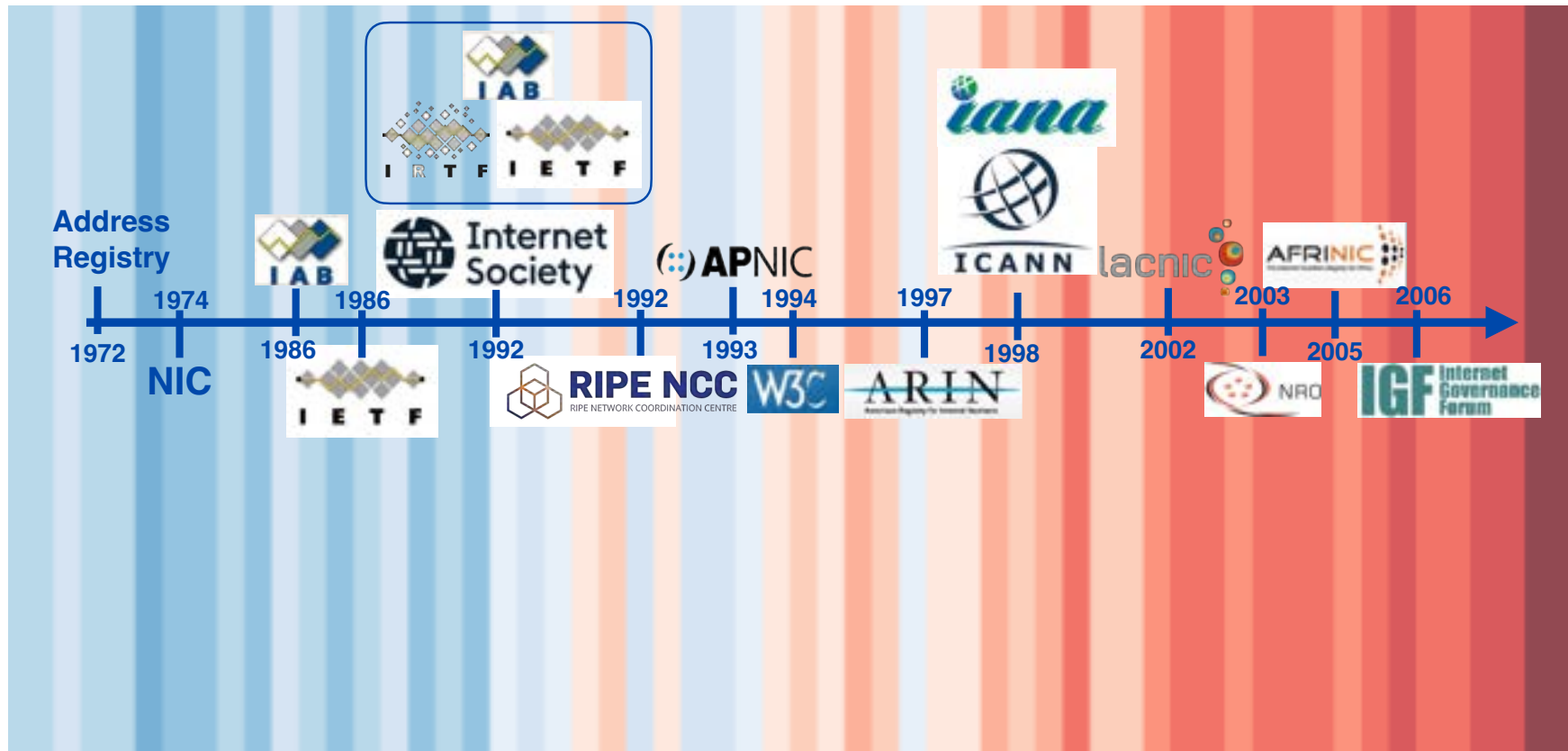
Regional Internet Registries



RIPE (community) and the RIPE NCC




Internet Governance & Global Warming Timeline



“Data is the New Oil” & Digital Colonialism


THE INTERNET USES A HUGE AMOUNT OF ENERGY. THIS IS DUE TO TWO KEY FACTORS:

MANUFACTURING AND SHIPPING



Technology companies build manufacturing and ship the physical hardware worldwide.

POWERING AND COOLING



Computers and smartphones need power and cooling. Powering servers and cooling them is energy-intensive. Data centers are often located in areas with abundant power and cooling capacity.



© A child at the Agbogbloshie electronic waste dump in Ghana. Photograph: Andrew McConnell/UKiary

1 MILLION WORKERS.
90 MILLION IPHONES.
17 SUICIDES.

THIS IS WHERE YOUR GADGETS COME FROM. SHOULD YOU CARE?

Nature is Fighting Back



- impact on the the operations of Internet infrastructure:
- **Sea-level rise & storms: flooding of data centers**
 - <https://labs.ripe.net/author/ggm/surviving-the-flood-how-data-centres-and-the-internet-must-face-climate-change/>
- **... & forest fires** <https://www.akcp.com/blog/data-centers-coping-with-climate-change-induced-wildfires/>
- **Water (un)availability for cooling power-plants & data centers:**
 - <https://www.datacenterdynamics.com/en/opinions/why-data-centers-need-to-talk-about-water/>
- **Energy over-consumption leads to (un)availability**
 - <https://www.consultancy.uk/news/28772/10-ways-businesses-can-reduce-their-digital-carbon-footprint>
 - ... taking water, land & energy **away** from local (human/plant/animal) population



Mixed Feelings

- Climate Grief, Climate Anxiety ... and some hope
- Curiosity about adjacent communities & frustration by slow actions in RIPE

EVERY FUTURE IMAGINED
BY A TECH COMPANY
IS WORSE THAN
THE PREVIOUS
ITERATION.



Vesna I



Mourning Today's Tragic Context



- **2020(2) = Third Year of Global COVID-19 Pandemic** (+2 new ones)
- **Wars in Ukraine, Armenia, Syria, Yemen...**
- **Climate Chaos...**
 - Summer heat-waves: draughts, forest fires, dry rivers, lack of drinking water...
 - Floods in Pakistan, Texas, Middle-East, Africa, Australia, Italy, Puerto Rico, Japan...
 - Glaciers melting in Alps, Andes, Himalayas, Greenland, Alaska...
 - Upcoming "hunger winter" with inadequate heating infrastructure...
- **Still, I am grateful for being alive, safe, healthy-ish**



Een datacenter van Google in Middenmeer.



REBOOT THE WORLD

The Internet: Can we survive with it?

15

Thirsty for More Green Tech in RIPE



GHG	Water
63%	83%
22%	9%
15%	7%

To Green the Internet, We Need RIPE

Michael Oghia · 29 Jun 2020

If Europe is going to realise its vision for a greener ICT ecosystem and a sustainable future, support from the RIPE community is imperative. But what can you do - as a network operator and as a user - to work towards a sustainable internet?

sustainability policy community

1 ❤️ 2 💬 🔗 📌



What Do We Do With E-Waste?

Mirjam Kühne · 9 Nov 2018

The headlines are raising awareness about the plastic soup that's clogging up our oceans but there's another problem much closer to home for much of the RIPE community: e-waste (aka 'dead electronics'). E-waste is a massive contributor to environmental pollution globally. We want to keep the conver...

sustainability community

2 ❤️ 1 💬 🔗 📌



Sustainability is Good for the Internet (and Business too)

Michael Oghia · 23 Jun 2017

In recent weeks, I've attended two events, SEE 6, hosted by the RIPE NCC in Budva, Montenegro, and the 10th European Dialogue on Internet Governance (EuroDIG) in Tallinn, Estonia. At both events, I had the opportunity to speak about the issue of sustainable access to the Internet.

sustainability governance

0 ❤️ 4 💬 🔗 📌

- **RIPE81 (October 2020): Sustainable ICT Procurement**

- Michael Oghia, Independent Community Member

- <https://ripe81.ripe.net/programme/meeting-plan/bof/#mon14>

- **RIPE84 (May 2022): Towards a Fossil Free Internet**

- Chris Adams, Green Web Foundation

- <https://ripe84.ripe.net/archives/video/751/>

- **My RIPE Labs series on Resilience**

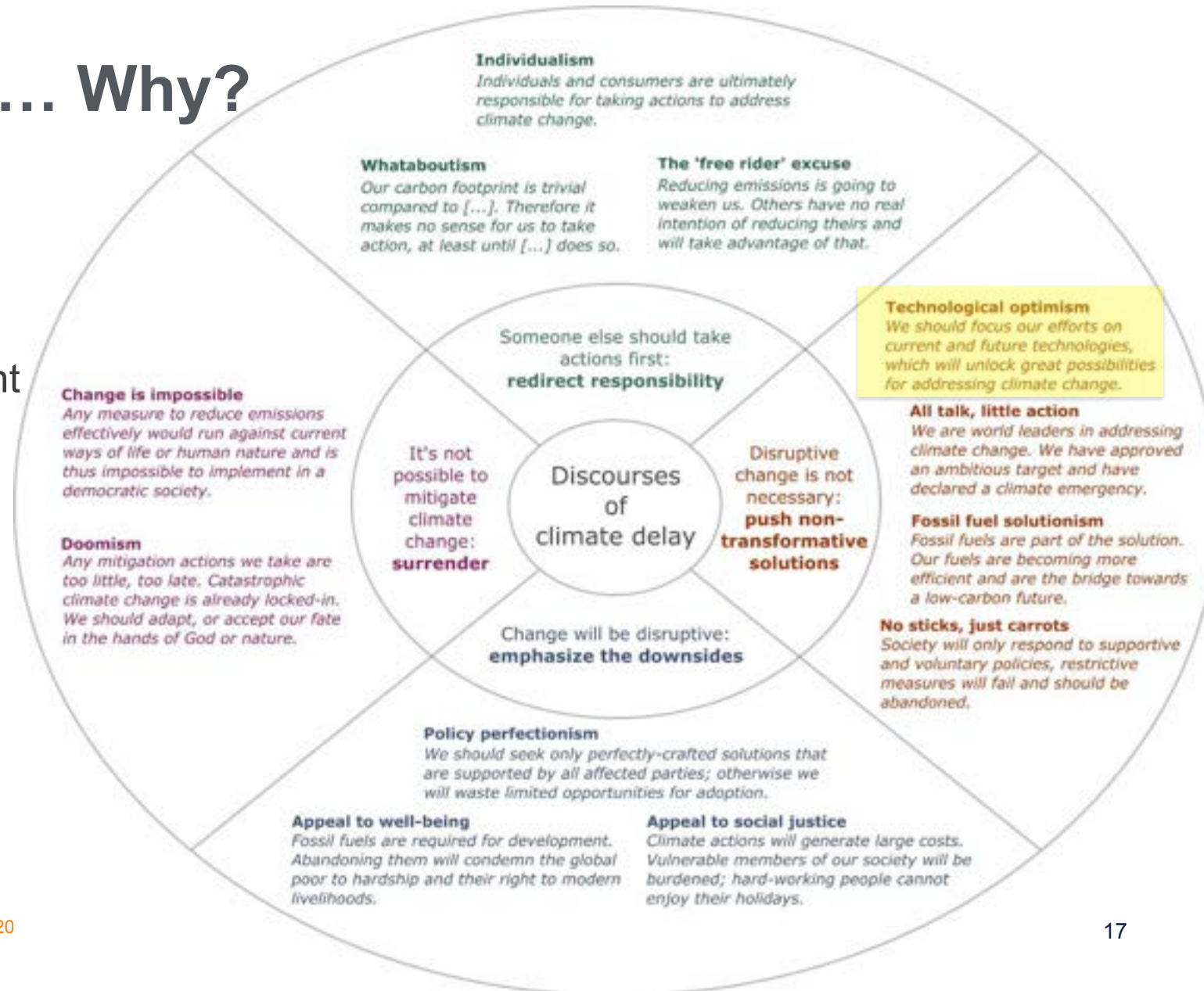
- [Layer 9](#) and [Layer 6](#) articles

Painfully Slow... Why?

- focused on growth
- efficiency myth (Jevons paradox)
- aligned with dominant power structures

● Beliefs:

- “tech is neutral”
- “we are the good guys” bias
- tech optimism



Curious About Other Tech Communities & “Green”

- **2021: GreenTech Events Every Month!**
 - <https://labs.ripe.net/author/becha/green-tech-2021-compilation/>
- **IETF (Internet Engineering Task Force) / IRTF (Research)**
- **ACM SIGCAS** <https://www.sigcas.org/events/sigcas-showcase-2022/>
 - association for computing machinery - special interest group on Computers and Society
- **“Computing Within Limits”** conference & papers (2015-2022)
 - My talk at MSCH2022: <https://media.ccc.de/v/mch2022-442-computing-within-limits>
- **sDIA: Sustainable Digital Infrastructure Alliance** : <https://sdialliance.org>

IETF

- **GAIA & OPSAWG at IETF115**

- November 2022, London
- IETF116, February 2023, Japan

- **IETF / IRTF Docs**

- <https://www.ietf.org/blog/towards-a-net-zero-ietf/> &&
- <https://datatracker.ietf.org/doc/slides-113-gaia-the-internet-and-environmental-sustainability-revolutionary/> ^^^^
- <https://datatracker.ietf.org/doc/html/draft-cx-green-ps-00> && <https://datatracker.ietf.org/doc/draft-eckert-ietf-and-energy-overview/>
- <https://datatracker.ietf.org/doc/draft-nottingham-avoiding-internet-centralization/>

Goals?

ITU-T REC-L.1470

- Reduction of environmental impact of **about 50%** by 2030 to align with the IPCC 1.5°C trajectory, [ITU-T L.1470] or severe effects for 2°C or ...
- **Keep warming at 1.5°C implies global emissions must peak by 2025 → in 9-10 IETF meetings**
<https://theconversation.com/ipcc-report-global-emissions-must-peak-by-2025-to-keep-warming-at-1-5-c-we-need-deeds-not-words-165598>
- Contribution of ICT in electricity usage is a major green-house gases factor:
 - By 2030 it could use up to 51% of global electricity, and contribute up to 23% of globally released GHG emissions
A. Andrae, T. Edler. On Global Electricity Usage of Communication Technology: Trends to 2030. Challenges 2015

Curious About Other Tech Communities & “Green”

13 Propositions on an Internet for a
“Burning World”

Tobias Fiebig
Max-Planck-Institut für Informatik

Doris Aschenbrenner
Aalen University

APNIC 2022:

<https://youtu.be/x5HwbtgBEEQ?t=3710>



<https://media.ccc.de/v/mch2022-278-m-a-y-will-contain-climate-change>

Vesna Manojlovic | Bits & Bäume, Berlin | October 2022



APC 2020: <https://www.apc.org/en/project/technology-environmental-justice-and-sustainability>

CCC 2019

<https://labs.ripe.net/author/becha/reporting-back-from-36c3-resource-exhaustion/>



13 Propositions for the Internet in the Burning World



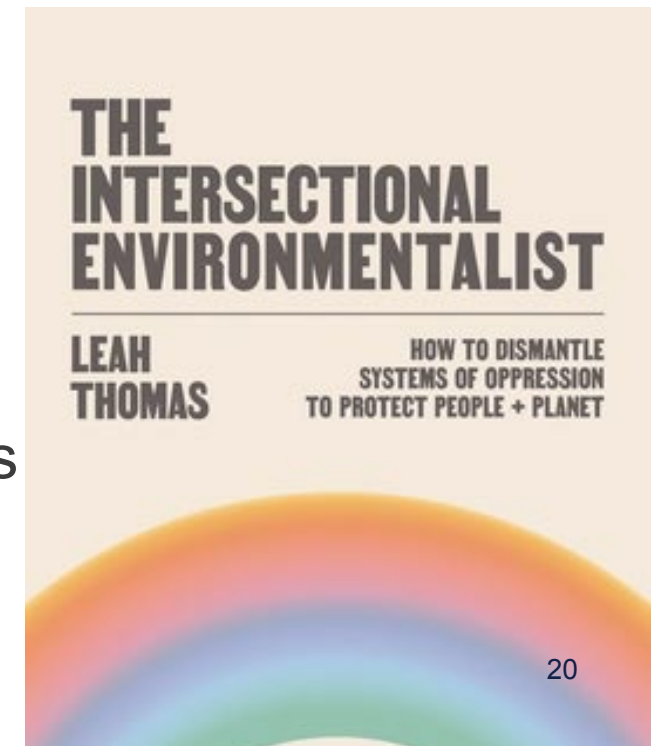
- 1. Operating systems requires operators to execute care, towards their system, their users, and the infrastructure as a whole.**
- 2. The centralization of the Internet has been promoted by a lack of care.**
- 3. There is a tension between privacy and security pitting decentralization vs. centralization.**
- 4. Centralization and profit are inherently incompatible with care for infrastructures.**
- 5. We have to be prepared for hypergiants' failing.**
- 6. Communities caring for local and distributed infrastructure are the future in a world falling apart.**
- 7. The slow adoption of IPv6 hinders a re-decentralization of the Internet.**
- 8. In a burning world, functionality is more important than security, but remains trumped by safety.**
- 9. Systems that are too complex to be understood by a single person cannot be sustainable.**
- 10. Systems should enable a better tomorrow and not burn the world even further.**
- 11. There are no technical solutions for social and societal problems.**
- 12. Internet sanctions: What once has been thought can never be taken back. The Internet will be falling apart.**
- 13. Digital sovereignty is being used wrong.**

[\(LINK\)](#)

Hopeful Directions Towards Planet-Friendly Internet



- Decolonising The Internet; Degrowth, Divestment...
- Feminist Internet / Data Feminism
- Community-owned & community-run networks (e.g. GAIA)
- “Right To Repair” Movement
- Permacomputing
- Low-Tech, Slow-Tech, Retro-Tech
- Intersectional Environmentalism
- Extinction Rebellion, Scientists Rebellion, Mothers Rebellion





Universal Needs

- RIPE: Awareness & Responsibility & Reparations & Justice
- You: Help / Contribution / Solidarity
- (Climate) Justice & Equity, Diversity, Inclusion

Maslow's Hierarchy of Needs \Leftrightarrow OSI Layers

<https://www.netnod.se/blog/technical-communities-resilience-during-covid-19-pandemic>



<https://www.ripe.net/about-us/press-centre/publications/presentations/2021/technical-communities-resilience-during-covid-19-pandemic-nluug-najaarsconferentie-2021>



0. RIPE Community Resilience: “You Are Not Alone”



1. Physical Layer / Physiological Needs

1.1. Surviving, Self-care, Wellness, Mental Health

2. Data Link Layer / Safety Needs

2.1. Safety Net (Risks, Security, Absence of Harm)

3. Network Layer / Belonging Needs: Connection!

3.1. Isolation != Empathy, Emotions vs Feelings; Love \Leftrightarrow Grief

4. Transport Layer / Esteem Needs

4.1. Boundaries, Burnout, Doing Less



5. Session Layer / Cognitive Needs

5.1. Embrace Neurodiversity

6. Presentation Layer / Aesthetic Needs

6.1. Art & Beauty; Climate Chaos; Nature is Healing; We belong to Circles

7. Application Layer / Need for (self) Actualisation

7.1. Web of Interconnections vs Privilege

8. Financial / Need for Contribution & Community Actualization

8.1. Economy of Care, Alternatives to Capitalism, Resisting Inequalities

9. Political / Need for Transcendence & Cultural Perpetuity

9.1. "Each society has the Internet they deserve"

Which RIPE Working Groups?

- **“Political” Layer: Cooperation-WG**
- **Application Layer / Aesthetic Needs**
 - Opensource-WG, Anti-abuse-WG, MAT-WG, DNS-WG
- **Transport Layer / Esteem Needs**
 - IoT-WG, Routing-WG
- **Network Layer / Needs for Connection**
 - Connect-WG, IPv6-WG, (IPv4) Address Policy
- **Link Layer / Physical Needs**
 - “RIPE NCC Services” / RIPE NCC members meeting

Vesna Manojlovic | Bits & Bäume, Berlin | October 2022

Address Policy Working Group

Anti-Abuse Working Group

Connect Working Group

Cooperation Working Group

Database Working Group

DNS Working Group

Internet of Things Working Group

IPv6 Working Group

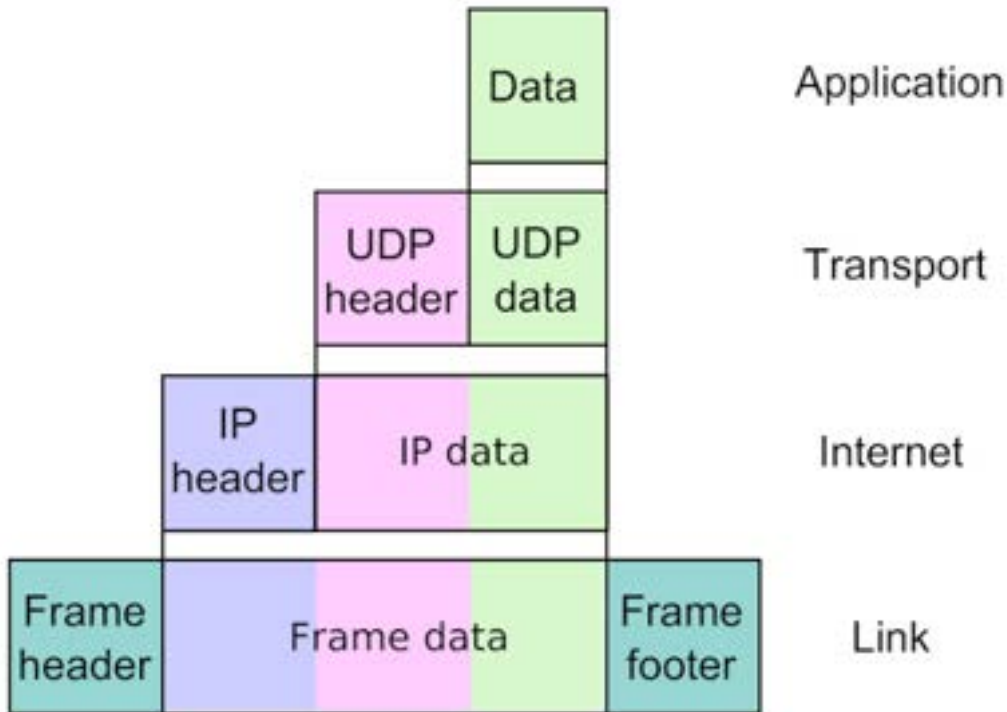
MAT Working Group

Open Source Working Group

RIPE NCC Services Working Group

Routing Working Group

UDP & JEDI: Justice, Equity, Diversity, Inclusion



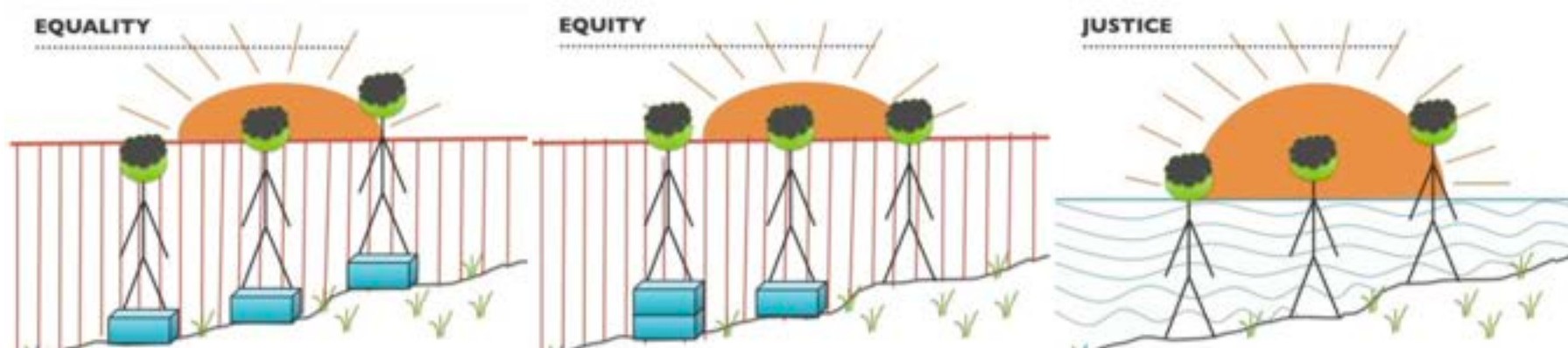
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<https://labs.ripe.net/author/becha/spring-and-summer-events-season-2022/>

Justice Equity Diversity Inclusion



<https://theavarnagroup.com/2019/05/25/and-heres-yet-another-equity-v-equality-v-justice-image-series/>





Requests & Offers

IF YOU HAVE COME HERE
TO HELP ME, YOU ARE
WASTING YOUR TIME.

BUT IF YOU HAVE COME HERE
BECAUSE YOUR LIBERATION IS
BOUND UP WITH MINE, THEN
LET US WORK TOGETHER.

- LILLA WATSON

Indigenous Australian visual artist,
academic, activist

#FEMINISTFRIDAY

FIGHT
INEQUALITY



Please take part in RIPE / NCC Communities



- **Join RIPE meetings**

- Twice a year, hybrid; ~1000 participants; network operators et.al
- Academic cooperation funding & Fellowship available : ripe.net/raci
- Become WG-chair or volunteer on the Programme Committee

- **Join smaller events organised by RIPE NCC**

- Regional meetings / Training courses & on-line education / Hackathons

- **Reach out to RIPE: write for RIPE Labs: <https://labs.ripe.net>**

Who, How and Why to take Part:



Activity	Developers	Academics	Operators	Refugees	Lawyers	Journalists	Students	Artists	Hackers	Activists	Researchers
Learning	NLUUG						RIPE84		MCH2022		
Volunteering		THF						MCH2022			SIG-NOC
Teaching			SIG-NOC			MCH2022			TMRA		
Organising					RightsCon			THF		SIGCOMM	
Caring / healing			RIPE84			TMRA			THF		THF
Hacking				MCH2022		SIGCOMM		AMRO22			
Facilitating			AMRO22				TMRA				
Documenting		TMRA				AMRO22			Re:Publica		
Networking (with people)					RIPE84		MCH2022				TMRA
Business	RIPE84					RightsCon		Re:Publica			
Regulating (laws/politics)		RIPE84			TNC22						SIGCOMM

RIPE Community Offers & Contributions



- **Community Projects Fund: ripe.net/cpf**
- **Diversity & Inclusion @ our events**
 - Paid childcare
 - RACI & Fellowship funding
 - Mentoring programme
 - Free (diversity) tickets for speakers
 - Code of Conduct & “Trusted Contacts” available
- **Bottom-up power distribution: community self-governance**

<https://ripe85.ripe.net/>

Join us at

RIPE 85
Belgrade, Serbia
24 - 28 October 2022

<https://labs.ripe.net/author/becha/building-bridges-between-diverse-communities-at-ripe-85/>



Join Other Green Internet Events This Year

- <https://sdialliance.org/events>
- 24-28. October: RIPE85, Belgrade & Online
- 5 & 6 November: IETF 115 Hackathon (online & London)
- 5. December IAB Workshop, online
 - <https://www.iab.org/activities/workshops/e-impact/>
- 27-31.12. CCC/37c3, Hamburg & Online events.ccc.de
- *And let me know of your events please !*

Greening RIPE through (h)Activism & Empathy

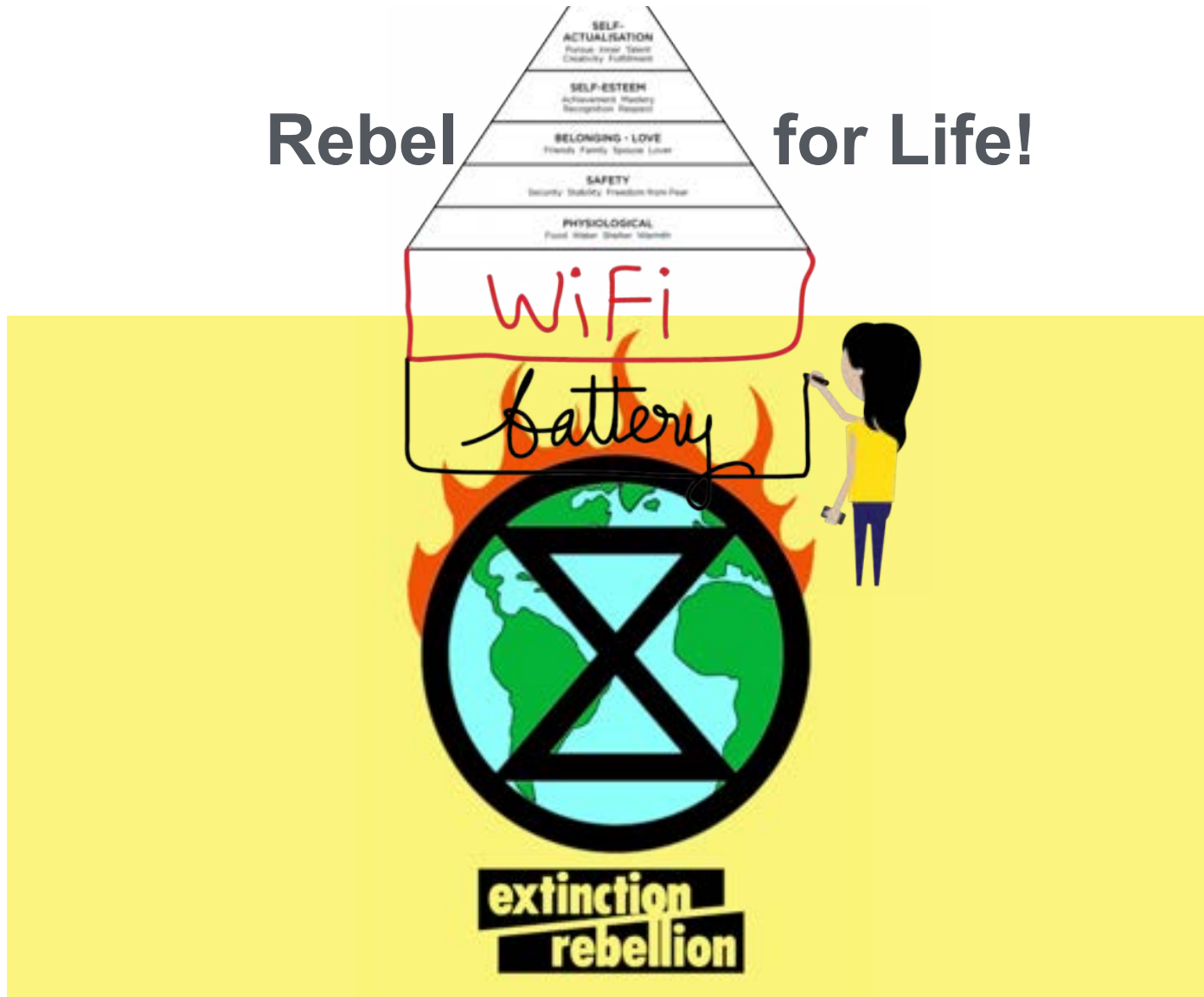


At a time when science plays such a powerful role in the life of society, when the destiny of the whole of mankind may hinge on the results of scientific research, it is incumbent on all scientists to be fully conscious of that role, and conduct themselves accordingly. I appeal to my fellow scientists to remember their responsibility to humanity.²¹⁰

With Great
Power
Comes
Great
Responsibility



Rebel for Life!



Questions? Comments, Compliments!



- **Greening RIPE through (h)Activism & Empathy**

- RIPE is part of Internet Governance power structures
- Curiosity about adjacent communities & frustration by slow actions in RIPE
- I need help; to contribute; JEDI (Justice, Equity, Diversity, Inclusion)
- Please join our community, & invite us to work on this together!
- <https://fahrplan22.bits-und-baeume.org/bitsundbaeume/talk/8WUASF/>

- **My other sessions at Bits & Bäume: “RIPE, Tea & Empathy”**

- **More: <https://labs.ripe.net/author/becha/>**



Extra Slides



Squirrels

Animals Against Technology

- https://wiki.techinc.nl/Hackers_tribes#Other_animals_against_Technology



TOTAL SUCCESSFUL CYBER WAR OPS
AS OF 2017.01.08 - 1748

Agent	Success
Squirrel	879
Bird	434
Snake	83
Raccoon	72
Rat	36
Marten	22
China	0
Russia	0*
USA	1



Squirrels Winning the Cyber War ;)



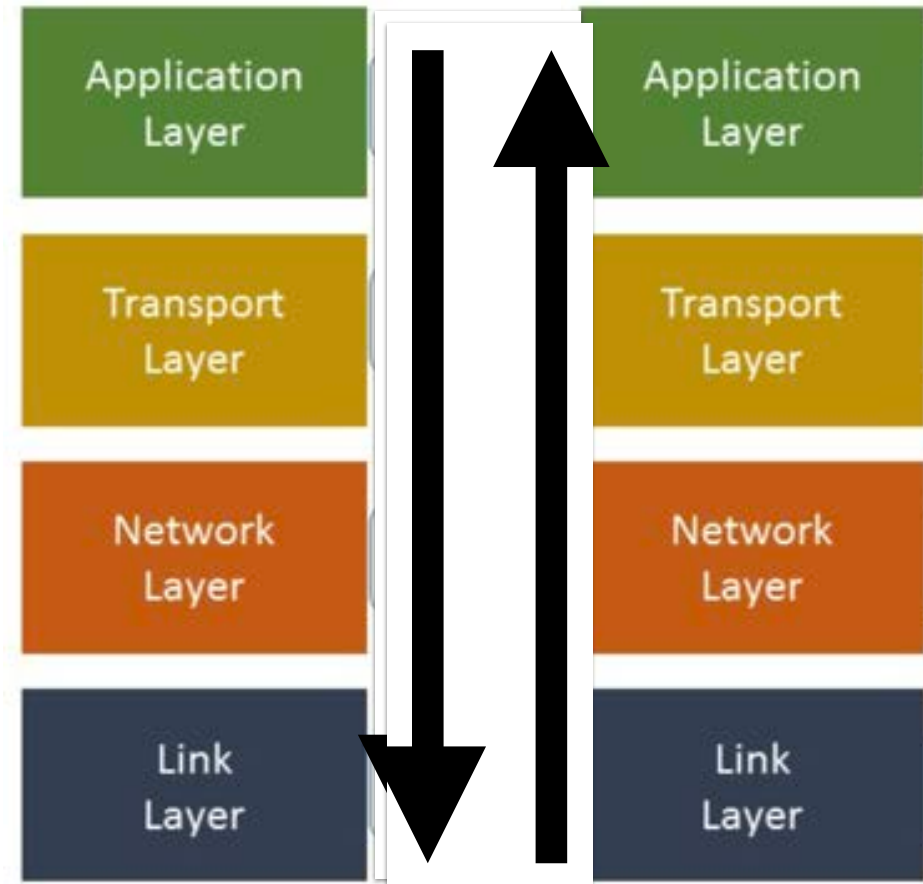


NVC



Practice: NVC Dance Floors

outer



Links to NVC in Tech

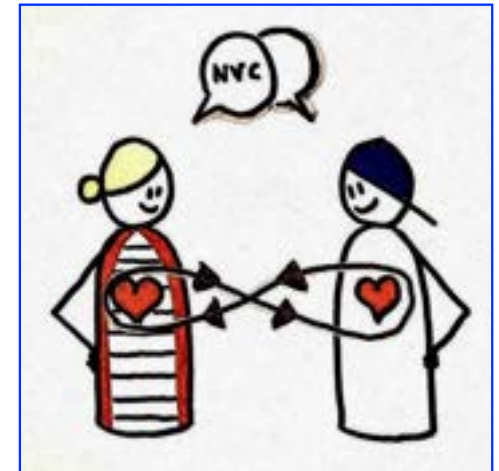
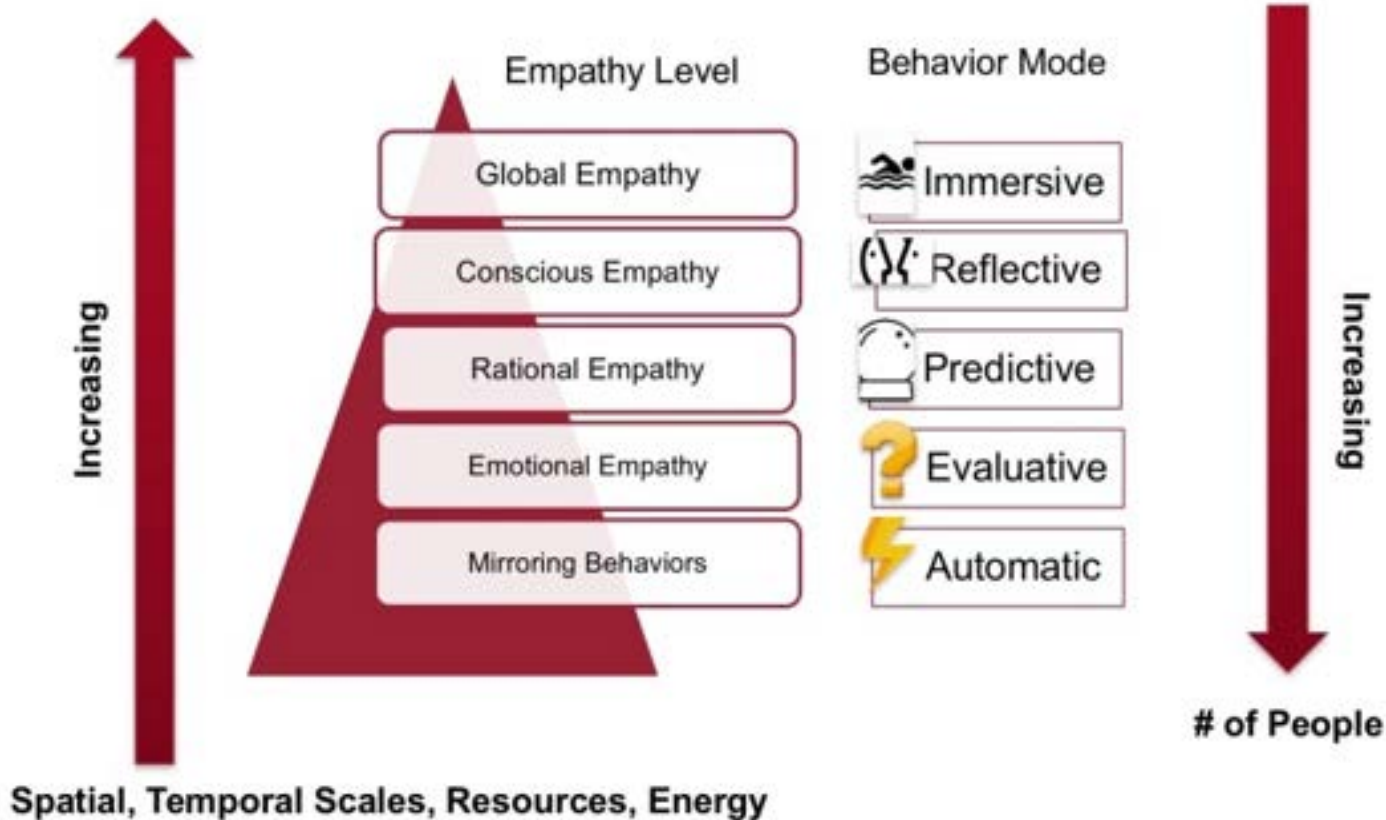
- Building Compassionate Communities in Tech
 - NodeConf EU 2013 ,Isaac Z Schlueter
- “Guide to Empathetic Technical Leadership” by Alex Harms
 - FREE to read online: <https://leanpub.com/littleguide/read>
- Conference “Open Source and Feelings” (#OSSfeel)
 - “NVC for Fun, Profit, and Self Defense”
- The empathy in tech <https://www.youtube.com/watch?v=PuLi3Uegn9g>
- Two blog posts for Agile teams: [link1](#) & [link2](#)
- NVC++ https://wiki.techinc.nl/Hackers_tribes#NVC.2B.2B

The Internet of Empathy

- *From: “To Our Friends” by The Invisible Committee*
 - <https://mitpress.mit.edu/books/our-friends>
- Positive freedom of connectivity, interaction and involvement
 - Instead of libertarian “freedom” as independence and self reliance
- This freedom comes **together with** greater responsibility
- *“the intrinsic value of a network does **not** lie in the sovereignty and independence of its nodes, but in their connectedness,”*
- *“Empathy is willingness to engage with the Other, and willingness to enrich network with our contributions”*

NVC = empathy & honesty

Levels of Empathy/Social Behavior Coupling



Gift Economics is based in what Marshall Rosenberg called "natural giving" – when human beings give and receive freely out of our intrinsic desire to contribute to one another.

<https://wiki.techinc.nu/Hac>

Learn NVC (NonViolent Communication)



- <https://nvctraining.com>
- “Our survival as a species depends on our ability to recognize that our well-being and the well-being of others are in fact one and the same.” – Dr. Marshall Rosenberg”
- “We recognize that the pain is deep and that much aid will be needed now, and in the future to support ongoing healing for all parties, Ukrainian, Russian, and others.”
- <https://www.connecting2life.net>, <https://cupofempathy.com> , <https://mirjamschulpen.nl/en/home/>



Quote by Marshal Rosenberg

For about 10.000 yers over most of our planet people have been operating according to, what I call, domination structures , structures in which some people claim to be superiors and have the right to control others because they know what's best.

Some of these people called themselves kings , tzars... It's very important for their structures to (be able to) sustain themselves, for people to be educated to be obedient to them.

So how do you educate people to be submissive and obedient?

You need to teach them a language in which they get disconnected from their own power and look outward to authority to guide how are they meant to live.

To do this requires a language that is static , that describes what people **are** , whether they are "good" or "bad" , right or wrong, normal or abnormal...

So, to maintain domination structures, a core component is to educate people with such static language, that uses the verb "to be" in ways that judges people: their behavior, their appearance, their intelligence; and in addition to this language that i call "a language of domination", it's also important to teach people **retributive justice**: retributive justice basically implies that if you are judged as bad by the authorities, you deserve to suffer for it, to receive punishment and if you are positively judged by authorities as good, then you deserve to be rewarded.

This is at the heart of violence on our planet.

Additional Links



- <https://labs.ripe.net/author/becha/ripe-community-resilience-economy-of-care/>
- <https://labs.ripe.net/author/becha/data-feminism-from-data-ethics-to-data-justice/>
- <https://labs.ripe.net/author/becha/computing-within-limits-2022-event-wrap/>
- <https://labs.ripe.net/author/becha/ripe-community-resilience-every-society-has-the-internet-they-deserve/>
- <https://labs.ripe.net/author/becha/ripe-community-resilience-nature-is-healing/>
- <https://irtf.org/gaia>
- <https://zenodo.org/record/7047049#.YzGNcy0RqgA> (The Role of Life Scientists in the Biospheric Emergency)
- https://wiki.techinc.nl/Hackers_tribes#Other_animals_against_Technology
- https://en.m.wikipedia.org/wiki/Jevons_paradox
- <https://archive.org/details/being-genuine-stop-being-nice-start-being-real-2/page/n11/mode/2up>
- <https://UnCiv.nl>

More Presentations

- <https://www.ripe.net/about-us/press-centre/publications/presentations/2022/the-resilience-of-the-internet-in-ukraine-ietf-113>
- <https://www.ripe.net/about-us/press-centre/publications/presentations/2021/technical-communities-resilience-during-covid-19-pandemic-nluug-najaarsconferentie-2021>
- <https://www.ripe.net/about-us/press-centre/publications/presentations/2020/ripe-ncc-tools-and-services-an-update-denog-10>