

Dagstuhl Seminar 24402  
Greening Networking: Toward a Net Zero Internet  
Agenda

**Monday Morning 9-12:30**

Session 1: Welcome, Logistics, Introductions

Session Chair: Cedric

9:00-9:15 Organizers Introduction, Scope and High-Level Plan

9:15-10:45 3-minute introduction “ice breakers” (one slide per participant)

10:45-11:15 BREAK

11:15-11:35 Talk: Jari Arkko – A Mobile Network Perspective

11:35-11:55 Talk: Romain Jacob – The Big Picture

11:55-12:15 Setting the Ground – Remaining Agenda Overview

*Introduce orthogonal dimensions of green networking that will be investigated further over the course of the seminar*

12:15-1:30 LUNCH

**Monday Afternoon 1:30-5:30**

1:30-1:45 GROUP PICTURE

Session 2: Applications, systems, and stakeholders

*This session will discuss the broader picture of Green Networking, including the energy footprint, potential architectural issues, and research challenges in relevant larger systems such as the Web, Media Streaming, Mobile Communications, and AI workloads. Specific systems, problems, requirements, problems, solution approaches, associated timelines, and assessment of potential impact will be discussed in respective subgroups.*

Session Chair: Noa

1:45-2:00 Framing presentation(s): Te-Yuan Huang

2:00-2:30 Group formation, candidate groups:

- Streaming

- Data Transport and Networking
- AI Workloads

Other possibilities (depending on audience interest) might include Blockchain, IoT, selected verticals

- 2:30-3:15 Group breakout sessions (parallel sessions for each group)
- 3:15-3:45 BREAK
- 3:45-4:30 Group breakout sessions continue
- 4:30-5:00 Group presentations and joint discussion
- 6:00-??? DINNER

After dinner: optional social gathering

### **Tuesday morning 9:00-12:30**

Session 3: Networking Technology

Session Chair: Dirk

*This session will discuss networking technology more directly, i.e., energy footprint and saving potential of specific functions, such as routing, traffic engineering, and wireless communications. Specific systems, problems, requirements, problems, solution approaches, associated timelines, and assessment of potential impact will be discussed in respective subgroups.*

- 9:00-9:30 Welcome back, Framing presentation(s)
- 9:30-9:45 Group formation, candidate groups:
  - Routing
  - Traffic Engineering

Other possibilities (depending on audience interest) might include power saving mechanisms, as well as cost models and incentives

- 9:45-10:30 Group breakout sessions (parallel sessions for each group)
- 10:30-11:00 BREAK
- 11:00-11:30 Group breakout sessions continue
- 11:30-12:15 Group presentations and joint discussion

12:15-1:30 LUNCH

## **Tuesday Afternoon 1:30-5:30**

Session 4: Lifecycle

Session Chair: Alex and Michael

*This session will discuss "lifecycle" and control loop aspects for energy consumption management, such as observability, analytics, prediction/forecasting. Specific systems, problems, requirements, problems, solution approaches, associated timelines, and assessment of potential impact will be discussed in respective subgroups.*

1:45-2:15 Framing presentation(s)

2:15-2:30 Group formation, candidate groups:

- Measurements and observation
- Analysis, aggregation, forecasting
- Planning and actioning

Depending on audience interest it is conceivable that groups may be split (e.g. telemetry separate from measurement) or take a specific focus.

2:30-3:15 Group breakout sessions (parallel sessions for each group)

3:15-3:45 BREAK

3:45-4:30 Group breakout sessions continue

4:30-5:00 Group presentations and joint discussion

6:00-??? DINNER either at Dagstuhl or outside (for people who signed up)

After dinner: optional social gathering

## **Wednesday morning 9:00-12:30**

Session 5: Putting it all together & wrap-up

*This session will summarize, process and consolidate the outcome of the previous two days of the seminar. The goal will be for the group to articulate a collective set of conclusions and set the stage to produce a seminar report.*

9:00-9:30 Welcome back, Framing presentation(s)

- 9:30-10:30 Plenary discussion  
Identify a matrix from the dimensions,  
overlayed with matrix of impact vs timeline for specific recommendations
- 10:30-11:00 BREAK
- 11:00-11:30 Group breakout sessions into teams to write outline of report sections
- 11:30-12:15 Reconvene to discuss and review together outcome report
- 12:15-1:30 LUNCH & WORKSHOP CONCLUDES