Making

LESS

happen

Greening of Streaming

www.greeningofstreaming.org

Members of Greening of Streaming

Problem space

IEA (most conservative) figures:

  ~1% of Global Final Electricity supply is used by Data Centres

  ~1.5% of Global Final Electricity supply is used by Telecoms

  ~6% (including the above) is ICT as a whole

CISCO: 70-80% of network traffic is video

'Order of magnitude': Streaming is probably driving demand for infrastructure that consumes **2% to 3%** of Global Final Electricity supply.

Whatever the actual value is it is clearly 'significant' enough to ensure the industry is being efficient - both for sustainability and for economic reasons

Principles

No GreenWashing

Member Led / Not for Profit - UG not SDO.

REAL change through education and engineering

Focus on Operational Energy (Watts / kWh)

Think systemically.

You can't 'win' sustainability; you can only win if we all win together.

Activities

8 Working groups

Language, Awareness, Best Practice, Traffic / Energy Measurement, Audio, Compression/Decompression, Driving Energy as a KPI for SDOs and Academic Liaison

Plus the LESS Accord as the overarching narrative.

'Overselling' in the TV, broadcast, internet and streaming industry:

We may buy into 'quality', but the term takes on various meanings within the streaming and broadcast industry--from visual quality to latency and buffering.

For streaming consumers, differences in quality are often imperceptible. Yet each incremental quality increase may demand significantly more energy.

The Proposition:

"What if the 'default' streaming encoding profile was Energy Optimised with 'acceptable' quality for general viewing rather than, as it is today, Quality Optimised (and typically over provisioned) with no energy consideration?"

(Note that this does not remove the option for opting in to Quality Optimisation - but proposes that the consumer be given the choice to select a quality level above the generally acceptable (energy optimised) 'default' … read on…)

Asking the industry for theoretical 'straw man' models:

"What would 'Low Energy Sustainable Streaming' (LESS) look like?"

"It's not the 'codec' - its the 'codec implementation'"

Greening of Streaming's 'action' - let's measure it system wide:

"If implemented 'globally' what difference to the energy demands of streaming *could* an adoption of The LESS Accord make?"

The discussion with the industry and its stakeholders:

"How disruptive would adoption of The LESS Accord *really* be for the industry?"

Can we reach an 'accord' between us?

Action

Action

Let's get the industry to 'do' something

A few months to 'spitball' and throw ideas at members.

Members meet in Eu Parliament (inviting regs / MEPs etc) to workshop 3 or 4 test models.

Over summer tests are prototyped, and presented at IBC.

Q4/Q1 tests are run at scale. Q2 data is provided to academia to analyse

Then end Q2 to Hollywood for a wrap up and announcement of the results.

The Low Energy Sustainable Streaming Accord

'The LESS Accord'

LESS

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