DNS RESEARCH FEDERATION

Internet Standards Tracker

raspg IETF 118

Carolina Caeiro & Nathan Alan

Nov 6, 2023

The Internet Standards Observatory (ISTO)

- The goal of the Internet Standards Observatory is to prevent Internet fragmentation.
- Identify standards proposals that could potentially challenge interoperability and significantly transform addressing, naming, networking and routing on the Internet.

Why Tracking Internet Standards?

- Important standards proposals currently under discussion that might shape the Internet of the future
  - Require more active engagement

- Barriers to engagement: time and resource intensive
  - Assistance identifying critical proposals

- SDOs are an opportunity to make the Internet better!
  - Encourage thorough discussions about how we want the Internet to evolve
  - Discuss Internet standards in the right fora

More on the Internet Standards Observatory (ISTO)

- Funded by ISOC Foundation and RIPE Community Fund
- What it offers
  - Standards Tracker(s)
    - Focus on standards under development: ITU-T (ready), IETF (in the works) and ETSI (up-next)
  - Knowledge Center
    - Academic Research
    - Blog articles

The Standards Tracker

TRACKER

ISTO Home | Tracker | About | Knowledge Base

9 Contributions

- [x] March 2023 (7)
- [x] October 2023 (2)

Status
New Work Item
Proponents
About
Proposal for standardisation
Proposed use cases

Study group 13

Search study group

SG13 Future networks
SG16 Multimedia & digital technologies
SG17 Security

Engage

Proposal for initiating a new work item on "Requirements and functional framework for ICN-enabled deterministic communication services beyond IMT-2020"

March 2023 Meeting | SG13 Contribution 0330

Proponent: **Shanghai Advanced Research Institute, Chinese Academy of Sciences**

About: control plane, data plane, multi access edge computing, distributed ledger technology, low latency

Proposed for standardisation: data aware networking, deterministic communication services, deterministic latency, deterministic networking, ICN, icn enabled deterministic communication services, information centric networking, name mapping

Proposed use cases: industrial control, intelligent agriculture, remote surgery, vr, vr games

New work item

Monitor

Proposal for initiating a new work item on requirements and functional framework of Information Centric Networking to support immersive live experience services

March 2023 Meeting | SG13 Contribution 0338

Proponent: **Shanghai Advanced Research Institute, Chinese Academy of SciencesChina Telecom**

About: user plane

Proposed for standardisation: data aware networking, ICN, information centric networking, name mapping

Proposed use cases: ar, augmented reality, virtual reality, vr

New work item

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Contributions

- [x] March 2023
- [ ] October 2023

Status

New Work Item

Proponents

About

Proposal for standardisation

Proposed use cases

- [ ] industrial control (1)
- [ ] intelligent agriculture (1)
- [ ] remote surgery (1)
- [ ] vr (3)
- [ ] vr games (1)
- [ ] ar (2)
- [x] augmented reality (2)
- [ ] virtual reality (2)
- [ ] xr (2)
- [ ] extended reality (2)
- [ ] fmsc (2)
- [ ] industrial internet (3)
- [ ] cnc in fmsc (1)
- [ ] leo satellite (1)

Study group 13

Search study group

SG13 Future networks | SG16 Multimedia & digital technologies | SG17 Security

Monitor

Proposal for initiating a new work item on requirements and functional framework of Information Centric Networking to support immersive live experience services

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Proponent: **Shanghai Advanced Research Institute, Chinese Academy of SciencesChina Telecom**

About: user plane

Proposed for standardisation: data aware networking | ICN | information centric networking | name mapping

Proposed use cases: ar | augmented reality | virtual reality | vr

New work item

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TRACKER

ISTO Home | Tracker | About | Knowledge Base

Contributions

- [x] March 2023

Status

New Work Item

- [ ] No (3)
- [x] Yes (3)

Proponents

About

Proposal for standardisation

- [x] data aware networking (3)
- [ ] ICN (3)
- [ ] information centric networking (3)
- [ ] name mapping (3)
- [ ] CNC (1)
- [ ] computing and network convergence (1)

Proposed use cases

Study group 13

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Proposal for initiating a new work item on requirements and functional framework of Information Centric Networking to support immersive live experience services

March 2023 Meeting | SG13 Contribution 0338

Proponent: **Shanghai Advanced Research Institute, Chinese Academy of SciencesChina Telecom**

About: user plane

Proposed for standardisation: data aware networking | ICN | information centric networking | name mapping

Proposed use cases: ar | augmented reality | virtual reality | vr

New work item

Monitor

Proposal for initiating a new work item on requirements and functional framework of Information Centric Networking to support machine learning in IMT-2020 and beyond

March 2023 Meeting | SG13 Contribution 0340

Proponent: **Shanghai Advanced Research Institute, Chinese Academy of Sciences**

About: user plane

Proposed for standardisation: information centric networking | name mapping | data aware networking | ICN

New work item

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The Backend of the Standards Tracker

Dashboards

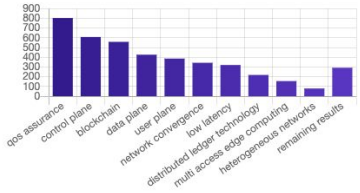
DAP Standards | Study Group 13 | ITU

Dashboard View

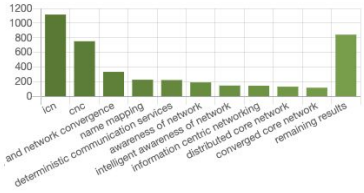
Active Meeting External Dashboard

PARAMETERS | Search Documents | Search Documents | Apply Parameters

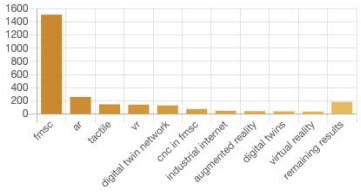
Document Discovery - About - Total Occurrences



Document Discovery - Standardisation - Total Occurrences



Document Discovery - Use Cases - Total Occurrences



Monitor

Propose to initiate a new work item on "Requirements of machine learning based QoS assurance to support deterministic communications across heterogeneous networks in local area network including IMT-2020 and beyond"

SG13 - Contribution 0530 | October 2023 Meeting

Source	University of Science and Technology Beijing; China Unicom.
About	Control Plane, Data Plane, Heterogeneous Networks, Low Latency, Qos Assurance
Proposed for Standardisation	Bounded Latency, CNC, Deterministic Communication Services, Deterministic Latency, Deterministic Networking
Proposed Use Cases	Industrial Internet

Monitor

Proposal to initiate a new work item on "Fixed, mobile and satellite convergence – Coordination of computing and networking for IMT-2020 networks and beyond"

SG13 - Contribution 0566 | October 2023 Meeting

Source	China Mobile Communications Co. Ltd.
About	High Bandwidth, Low Latency, Qos Assurance
Proposed for Standardisation	CNC
Proposed Use Cases	Extended Reality, Fmsc, Industrial Internet, Leo Satellite, Xr

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Document Input

DAP LIVE Standards | Study Group 13 | ITU

Document Upload

INPUTS
- Document Upload
- Document Data

ANALYSIS
- Stored Queries
- Snapshots

OUTPUTS
- Dashboards
- API Connections
- API Keys

Document Datasource

Upload your documents using the form below.

SETTINGS — Adjust the rules around how the uploaded documents will be processed.

Title
Enter the name to identify this data source

Upload Documents
The documents to be processed.

Select file(s) to upload or drag and drop
.docx, .txt, .pfd, .zip

Custom Document Parser
Use a custom document parser to process the documents.

Select Custom Document Parser
Search for a custom parser
Start typing name to view available parsers

Indexing
Set whether you want the content of the documents to be indexed

☐ Index Document Content

Storage Options
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☐ Store Original File
☐ Store Document Text

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Dictionaries, Document Index, and Scoring

DAP LIVE Standards | Study Group 13 | ITU

Document Data

INPUTS
- Document Upload
- Document Data

ANALYSIS
- Stored Queries
- Snapshots

OUTPUTS
- Dashboards
- API Connections
- API Keys

Document Data

A list of all the documents that have been uploaded to this project.

Import Data

Search Document Data

Project Document Data

About Words	Edit	Explore	⋮
Document Sources	Edit	Explore	⋮
Documents	Edit	Explore	⋮
Documents Index		Explore	
Meetings	Edit	Explore	⋮
Ongoing Work Phrases	Edit	Explore	⋮
Scoring Configuration	Edit	Explore	⋮
Scoring Rules	Edit	Explore	⋮
Standardisation Words	Edit	Explore	⋮
Stopwords	Edit	Explore	⋮

Showing 1 - 10 | 10

DNS RESEARCH FEDERATION

Dictionaries: About Words

Data Explorer

Document Data > Data Explorer

OPERATIONS | columns | formula | join | parameters | summarise | filter | reload

word
blockchain
control plane
Data plane
Digital Object Architecture
distributed ledger platform
distributed ledger system
distributed ledger technologies
distributed ledger technology
forwarding plane
guaranteed delivery
heterogeneous networks
hierarchical IP address allocation
high bandwidth
high throughput
identity service provider
intelligent vehicle
low latency
Metaverse
multi access edge computing
negligible latency
network convergence
network status information

Showing 1 - 35 | 1000

Cancel | Export Data | Save & Exit

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Scoring Configuration

Data Explorer

Document Data > Data Explorer

OPERATIONS

columns | formula | join | parameters | summarise | filter | reload

Config	Standardisation Word Weighting	Max Standardisation Words	Max Standardisation Frequency	About Word Weighting	About Max Words	Max About Words Frequency	Use Case Weighting	Has Use Case Weighting	Max Use Case
1	50	8	75	15	5	50	20	10	5

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Document indexing

Data Explorer

Document Data > Data Explorer

OPERATIONS: columns, formula, join, parameters, summarise, filter, reload

Document File Name	Section	Phrase	Phrase Length	Frequency
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations	1	2
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and	2	2
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronyms	3	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronyms g	4	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronyms g th	5	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronymsthis	3	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronymsthis draft	4	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	abbreviations and acronymsthis draft recommendation	5	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability	1	4
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability can	2	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability can assist	3	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability can assist the	4	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability can assist the controller	5	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability to	2	3
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability to adapt	3	1
C001-SG13-T22-Q2-13-July2023-Cn-Y.NGNe-NCI-reqts.docx	July 2023	ability to adapt to	4	1
C001-SG13-T22-Q2-13-July2023-Cn-				

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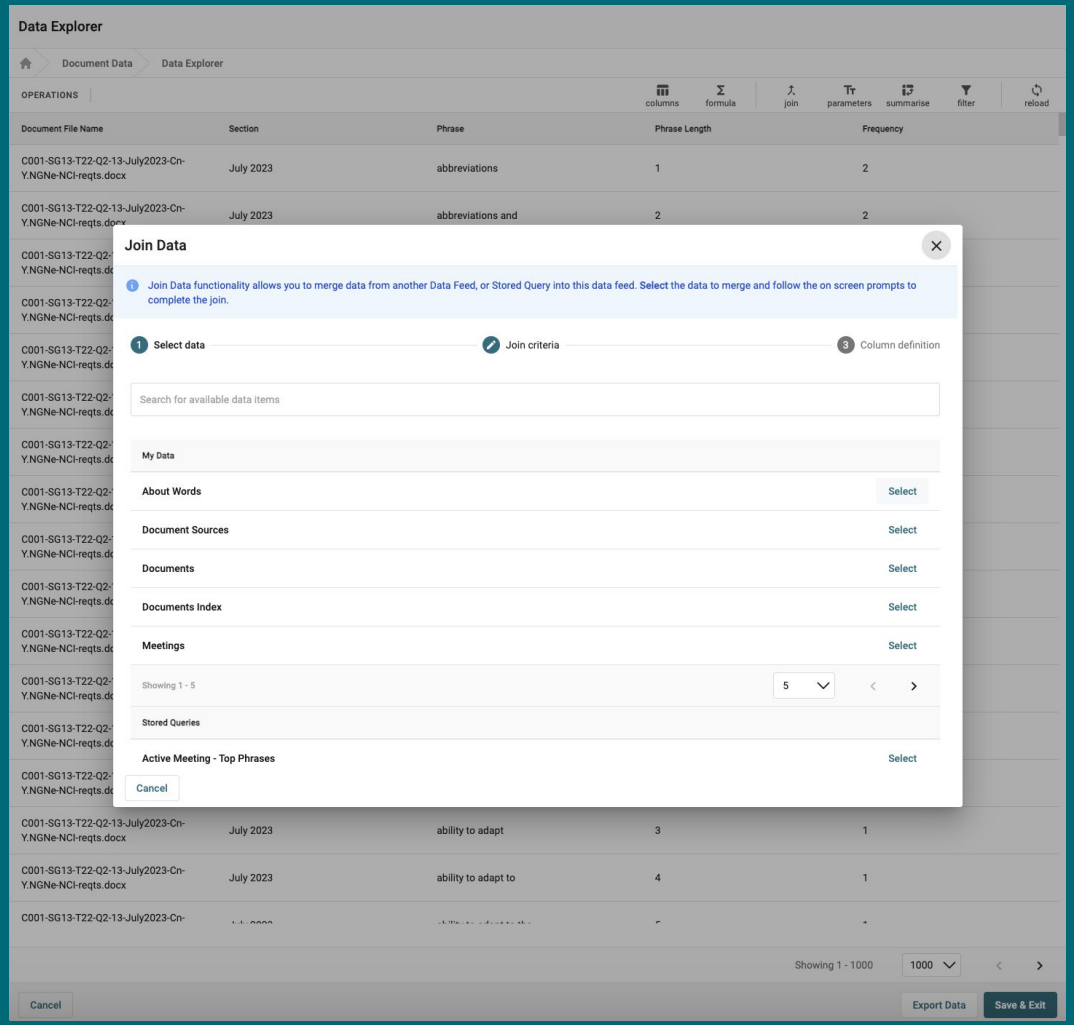
Joining datasets



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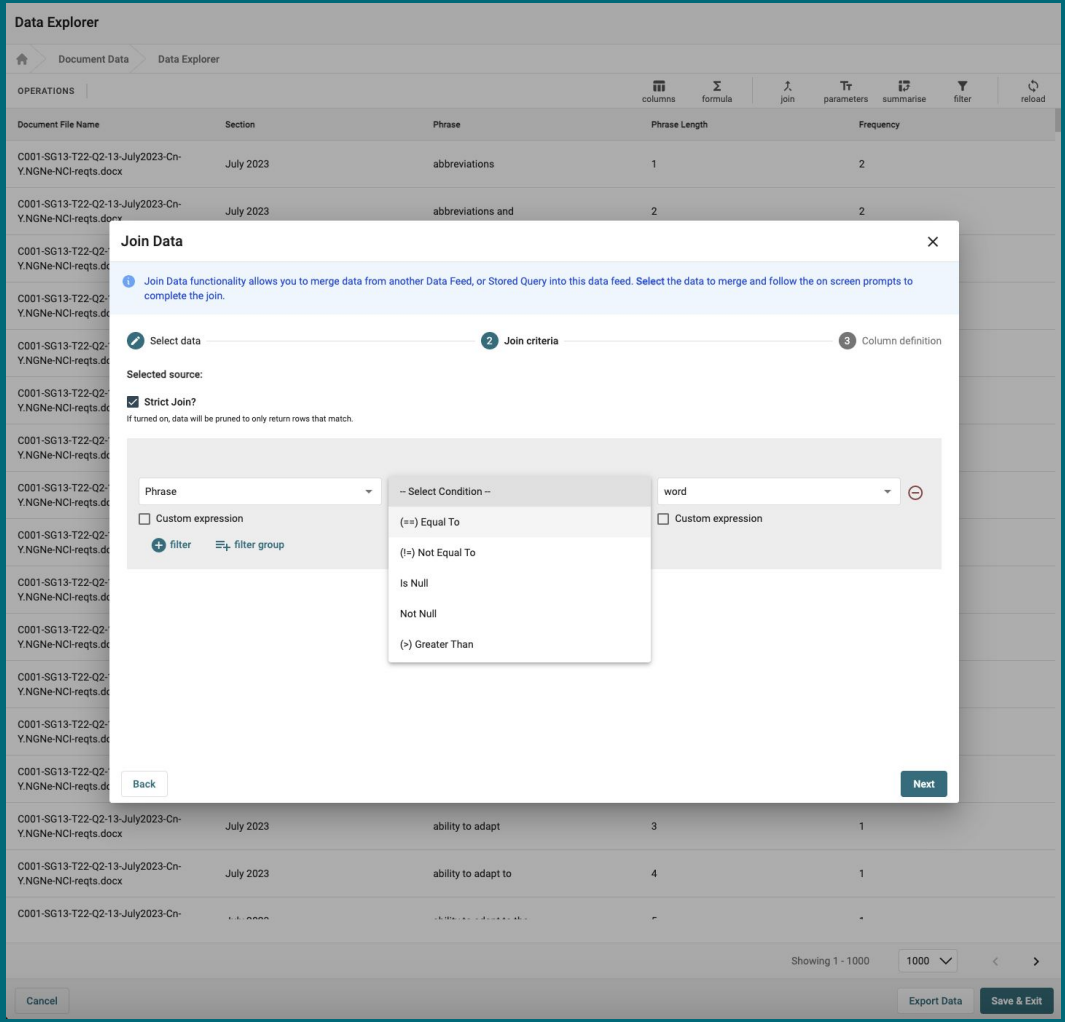
Joining datasets



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Joining datasets

Data Explorer

Document Data > Data Explorer

OPERATIONS: columns, formula, join, parameters, summarise, filter, reload

TRANSFORMATIONS: 1st Join

Document File Name	Section	Phrase	Phrase Length	Frequency	word
C003-SG13-Proposal for updating ITU-T Y.ARA-CPN.docx	July 2023	control plane	2	1	control plane
C008-SG13-T22-SG13-Q2-Jul23-C-xxx-Y.Arch_NGNe_ncp.docx	July 2023	control plane	2	32	control plane
C009-SG13-T22-SG13-Q2-Jul23-C-yyy-Y.Arch_NGNe_ncp.docx	July 2023	control plane	2	30	control plane
C010-SG13-T22-SG13-Q2-Jul23-C-zzz-Y.Arch_NGNe_ncp.docx	July 2023	control plane	2	29	control plane
C011-SG13-Proposal to modify and update chapter 8 and 9 of Y.SAN.docx	July 2023	control plane	2	1	control plane
Q16-SG13-Jul23-C-130-Y.QKDN-amc.docx	July 2023	control plane	2	1	control plane
Q16-SG13-Jul23-C-137-Y.QKDN-TSNfr.docx	July 2023	control plane	2	2	control plane
T22-SG13-C-0026!!MSW-E.docx	July 2022	control plane	2	7	control plane
T22-SG13-C-0027!!MSW-E.docx	July 2022	control plane	2	4	control plane
T22-SG13-C-0031!!MSW-E.docx	July 2022	control plane	2	1	control plane
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T22-SG13-C-0039!!MSW-E.docx	July 2022	control plane	2	1	control plane
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T22-SG13-C-0066!!MSW-E.docx	July 2022	control plane	2	7	control plane
T22-SG13-C-0075!!MSW-E.docx	July 2022	control plane	2	1	control plane

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Dashboards

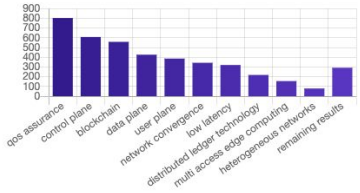
DAP Standards | Study Group 13 | ITU

Dashboard View

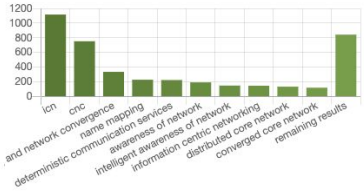
Active Meeting External Dashboard

PARAMETERS | Search Documents | Search Documents | Apply Parameters

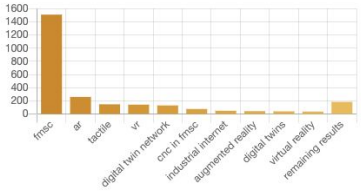
Document Discovery - About - Total Occurrences



Document Discovery - Standardisation - Total Occurrences



Document Discovery - Use Cases - Total Occurrences



Monitor

Propose to initiate a new work item on "Requirements of machine learning based QoS assurance to support deterministic communications across heterogeneous networks in local area network including IMT-2020 and beyond"

SG13 - Contribution 0530 | October 2023 Meeting

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Resources - ISTO Knowledge Center (Research)

Call for Papers: Technical Standards for a Global Internet

28th June 2023

Research, Technical Standards

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Resources - ISTO Knowledge Center (Research)

- “QUIC, or the battle that never was: a case of re-infrastructuring control over Internet traffic.”Clement Peranaud & Francesca Musiani, Free University of Brussels (VUB) & French National Centre for Scientific Research (CNRS)
- “Opening Internet standardisation to political interventions.” Roxana Radu, University of Oxford - Blavatnik School of Government
- “Enhancing Digital Governance in Africa: The Crucial Role of Standards Organizations in Shaping the Internet Landscape.” Wale Bakare, Webfala Digital Skills for All Initiative
- **"Understanding Internet Standardisation Processes through Longitudinal Data-driven Analysis." Ignacio Castro - Queen Mary University of London.**
- **“Corporate influence in Standards Bodies.” Nick Merrill - University of California, Berkeley**
- **“Internet Standards: Measuring the Impact of SDO Policies and Working Practices” Stephen McQuistin - University of St Andrews, UK**
- “Role of Epistemic Communities in Setting Standards for Quantum Technologies.” Yug Desai - South Asian University.

Resources - ISTO Knowledge Center (Blog)

- **Centralization** – are protocols part of the problem? Does it even matter?
- **Standardizing the Future** – what's behind the drive to standardize technologies that don't exist yet?
- **How to Predict the Future** – understanding how new and emerging technologies get standardized and competition between standards organizations
- **Quantum: Neither Here Nor There** – the coming competition for standardization of quantum technologies on the Internet. Difference between research and standardization for quantum-related networking technologies.
- **It Isn't Easy Being Green –** Can protocol development really influence climate change?
- **I Wouldn't Join a Club That Would Have Me as a Member** – why is it so hard for normal people to participate in technical standards organizations?