SCION: THE NEXT-GENERATION INTERNET

For secure, reliable and high-performing
data communication in today's world

March 2025

SCION
ASSOCIATION

TODAY'S INTERNET

Designed in the '80s, the current Internet – made up of more than 70,000 networks (or paths) through which data, such as pictures, videos, calls, financial and personal information, flows – can no longer meet the security, reliability, and performance needs of today's society.

When data is sent from one device to another, the route it takes is determined automatically, without the sender having any control over it. As a result, data can be routed through vulnerable, unsafe, or congested networks, which puts its integrity, availability, and performance at risk.

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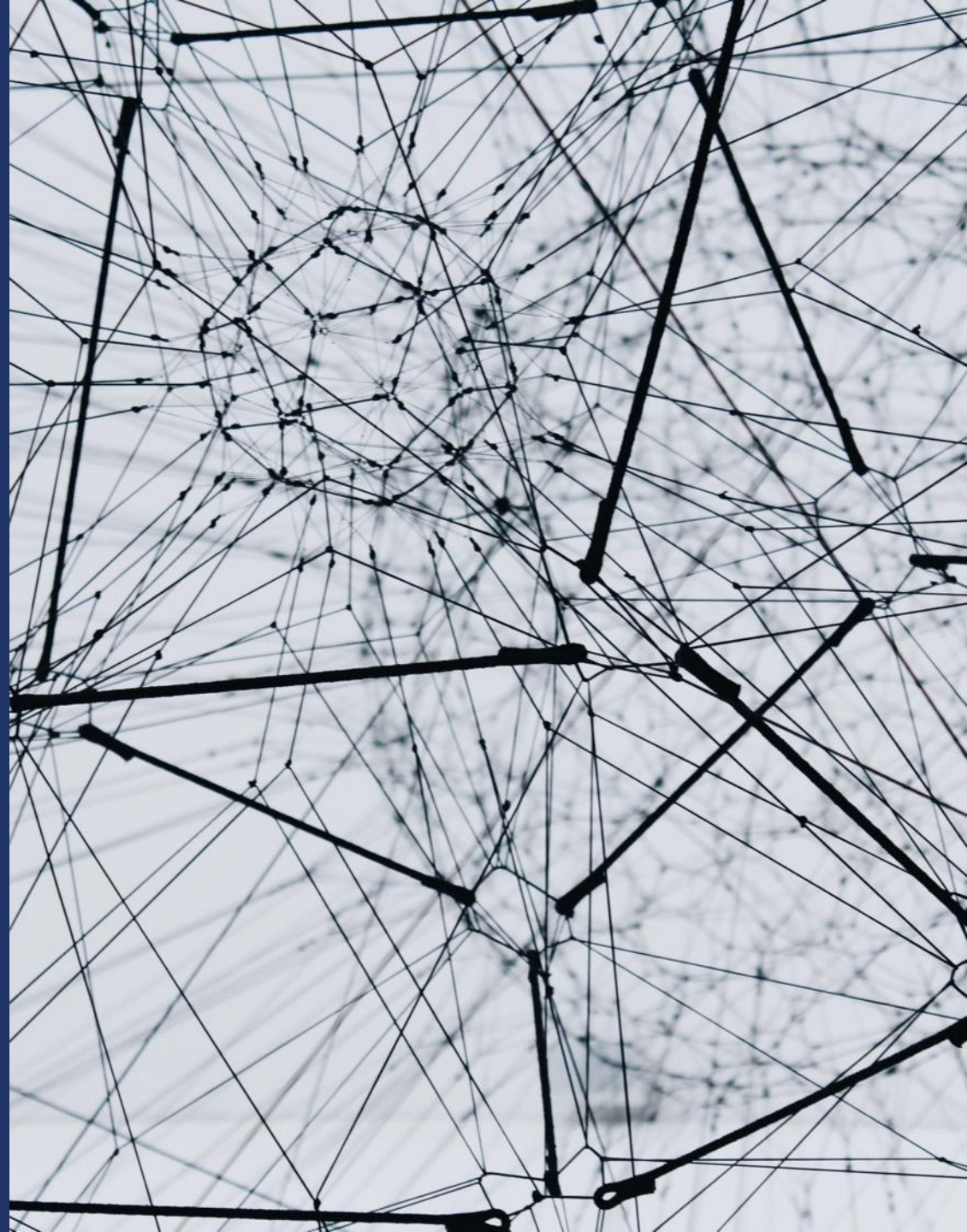
ROUTING ISSUES OF THE INTERNET

Issues with BGP have been understood for many years

VULNERABLE TO ROUTE LEAKS AND HIJACKING

Service disruption, traffic interception, redirection or modification, and potential for large-scale Distributed Denial-of-Service (DDoS) attacks.

LACK OF PATH SELECTION, LONG FAILOVER TIMES

Data can be (and often is) routed through different countries and over unsafe or congested networks. Failure reaction time is too long for critical infrastructure.

NO WAY TO ENFORCE DATA SOVEREIGNTY

Traffic can be disrupted, intercepted, or monitored by bad actors, and data can be sent outside of particular jurisdictions, which can breach national and supranational data protection legislation, such as FADP and GDPR.

What's clear is that the Internet can no longer meet the security and reliability needs of many organizations and users, particularly those in the finance, healthcare, utilities, and public sectors, as well as operators of critical infrastructure.

WHAT IS SCION?

SCION is a resilient inter-domain path-aware architecture that offers the following advantages:

TRUSTED NETWORKS FOR REDUCED ATTACK SURFACE

Clear network governance with common trust domains with agreed trust policies.

PATH SECURITY AGAINST HIJACKINGS

Paths are cryptographically secured at each hop. Networks can choose how they advertise their network topologies and how they send and receive traffic from other SCION networks.

GEOFENCING FOR DATA SOVEREIGNTY

Users can select the path(s) by which to send their data across the Internet, based on optimal characteristics or other parameters (e.g. geofencing, latency, ...).

MULTI-PATH AND FAST FAILOVER FOR PERFORMANCE AND UPTIME

SCION uses multiple paths and operators simultaneously, switching paths in less than a second, increasing resilience and performance.

SCALABLE AND INTEROPERABLE FOR EASY DEPLOYMENT

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SCION NETWORKS TODAY

FINANCE

The Secure Swiss Finance Network (SSFN) is an inter-banking network, handling money transfers between banks and other critical real-time financial services in Switzerland.
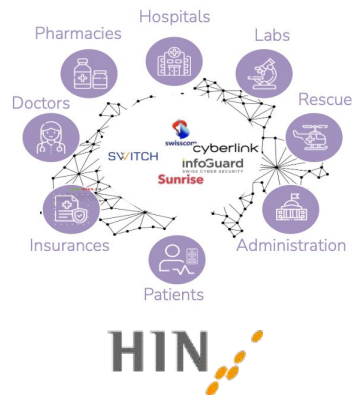
- 300+ institutions
- ~200 Billion CHF/day

SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK

SIX

Zürcher Kantonalbank

UBS

HEALTHCARE

HIN adopts SCION to interconnect Swiss hospitals and 50K+ doctors.

Pharmacies
Hospitals
Labs
Doctors
Rescue
swisscom cyberlink
SWITCH infoGuard
Sunrise
Insurances
Administration
Patients

HIN

POWER

The Association of Swiss Electricity Companies has spearheaded the Secure Swiss Utility Network (SSUN).

The SSUN is as a community network, designed to integrate validated ecosystems and industry platforms, cloud applications, BPO providers, IoT, technicians, remote workers, and security operation centers.

axpo

LITECOM

VSE AES

EDUCATION

The SCION Education, Research & Academic Network connects campuses with path-aware high performance SCION connectivity.

KAIST
한국과학기술원

OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

PRINCETON UNIVERSITY

SWITCH

ETH zürich

KOREA UNIVERSITY

UNIVERSITY of VIRGINIA

GÉANT
Networks · Services · People

NUS

PAYMENTS

The Secure EFTPOS Network (SEPN) leverages SCION technology to deliver unmatched resilience, security, and flexibility in cashless payments.

ep2

SWISS PAYMENT ASSOCIATION SPA

VEZ
Verband Elektronischer Zahlungsverkehr
Association les Paiements Electroniques

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THE WORLD OF SCION

A growing ecosystem

THE EXPERTS DRIVING INNOVATION

With over sixty researchers and hundreds of practitioners using SCION in real-world scenarios, the deployment of SCION's technology continues to expand.

BUILDING INFRASTRUCTURE FOR COMPETITIVE EDGE

Service providers, integrators and vendors play a crucial role in managing and maintaining the infrastructure that enables SCION. They offer SCION services to the users, enabling SCION's use today.

THRIVING THROUGH SECURITY, RELIABILITY AND PERFORMANCE

With SCION, enterprises in various verticals, non-profits, app developers and blockchain developers can have complete control over their online data flows, benefitting from security, reliability and performance advantages.

INSIDE THE SCION ASSOCIATION

Open, trusted, connected and curious

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CREATING A SAFE CONNECTED WORLD

Our Purpose is to create a safe connected world. Because we believe in a future where the exchange of information can be made trustworthy; anytime, anywhere and for anyone. Our openness, curiosity to learn and innovate continuously pushes the boundaries of what is possible. It's what drives us and it's what makes SCION a truly transformative catalyst. Fast, reliable and scalable. This is why SCION is the first choice for everyone looking to elevate the secure exchange of data.

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OUR VALUES

The guiding principles we live by

WE ARE OPEN

- We actively seek and welcome new ideas, empowering innovation and continuous improvement.

- We cultivate a culture of broadening horizons and learning, constantly challenging ourselves to explore new ways of making SCION and everyone within even better.

- We are inclusive and nurture a community that celebrates diversity, embracing everyone's unique contributions.

- SCION is an inviting space where collaboration and teamwork thrive.

- Together, we build an open ecosystem, uniting diverse talents and perspectives to continuously elevate SCION as the transformative leap in internet technology.
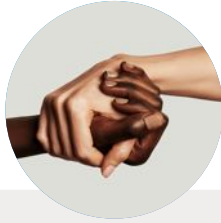
WE ARE TRUSTED

- At the core of our motivation lies a deep commitment to the safety of information exchange – making our lives safer and better.

- But it's not just about protecting sensitive data; it's about safeguarding the trust and confidence placed in the SCION technology we continuously elevate.

- This extends to the people we collaborate with, fostering a culture of mutual trust and respect in our entire ecosystem: academics, researchers, implementation partners, users etc.

- We believe that building strong relationships lays the foundation for a reliable and successful future of SCION.
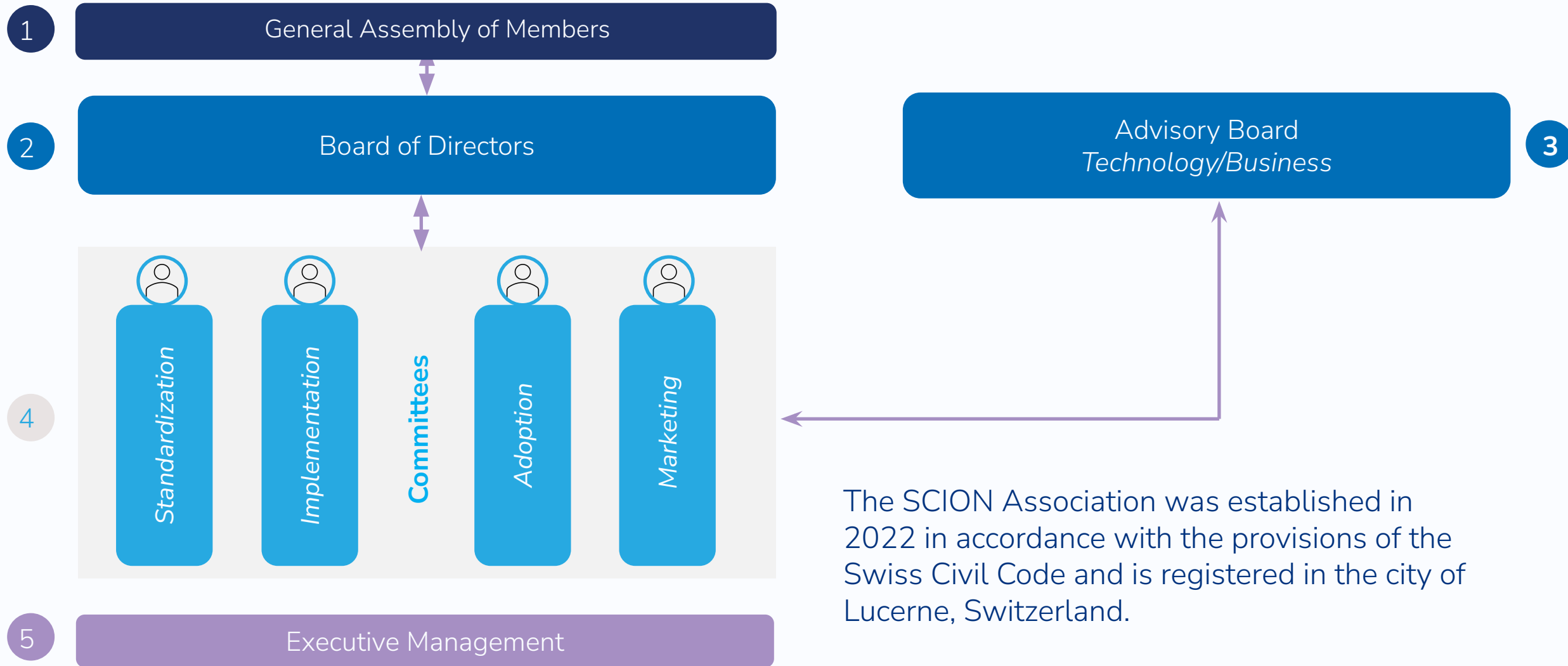
WE ARE CONNECTED

- Connectivity is the heartbeat of SCION and our society. It links our revolutionary technology with the real world.

- And it fuels our passion to continuously think and build secure data exchange technology, fostering deep trust and collaboration within and beyond our ecosystem.

- We forge bonds that transcend boundaries, uniting as teams and individuals.

- With SCION technology as our catalyst, we revolutionize internet architecture, driven by the profound belief in a future where every connection matters, anytime, anywhere and for anyone.

WE ARE CURIOUS

- We live relentless curiosity, encouraging everyone in our environment to embrace a thirst for knowledge, explore new frontiers, and challenge the status quo.

- We always go deep and love to dissect complexity – and then to resurface with simplicity.

- The desire to learn and innovate, pushing the boundaries of what is possible to make the internet a more secure place is what drives us.

- It's what makes SCION a truly transformative catalyst to safely exchange information. Fast, reliable and scalable.

SCION ASSOCIATION

GOVERNANCE - OVERVIEW

1 General Assembly of Members

2 Board of Directors

3 Advisory Board
Technology/Business

4 Committees
- Standardization
- Implementation
- Adoption
- Marketing

5 Executive Management

The SCION Association was established in 2022 in accordance with the provisions of the Swiss Civil Code and is registered in the city of Lucerne, Switzerland.

SCION ASSOCIATION

BOARD OF DIRECTORS

LOTHAR THIELE

Professor,
ETH-Delegierter für Digitale
Transformation, ETH Zürich

PROF. RETO FRANCIONI

UBS European Chair

DR. ULI SIGG

Private individual

DR. THOMAS WELLAUER

SIX Group BoD

PROF. VANESSA WOOD

ETH Board, VP Corporate
relations

DR. THOMAS MOSER

SNB Observer

ANDREA MAECHLER

BIS Observer

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BURKHARD BALZ

Member of the Executive Board of the Deutsche Bundesbank

CORNELIUS DORN

Head of Strategy & Architecture, SIX

MARTIN JETTER

Chairman of the Supervisory Board, Deutsche Börse AG

MARIAM KAYNIA

Director of Architecture, Strategy and Analytics, Telefónica Germany

MARTIN BOSSHARDT

CEO Anapaya

MARKUS NISPEL

CTO EMEA, Extreme Networks

ADRIAN PERRIG

Professor, ETH Zürich

HAUKE STARS

Member of the Executive Board / CDO, Volkswagen Group

PETER THÜRING

Head IT, SNB

KLAAS WIERENGA

Chief Information & Technology Officer, GÉANT

HUI ZHANG

Chief Scientist, Chairman of the Board, Conviva

MIKE DARGAN

Chief Operations and Technology Officer at UBS

SCION ASSOCIATION

OUR TEAM

NICOLA RUSTIGNOLI

Co-CEO

LUZIUS CAMERON

Co-CEO

KATARINA GARIC

Marketing & Communications Manager

JEAN-CHRISTOPHE HUGLY

Software Engineer

KEVIN MEYNELL

Community Engagement Manager

KATYA TITKOVA

Software Engineer

ROMAN SCHARKOV

Software Engineer

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GROWING THE SCION MOVEMENT

Empowering communities, creating value

TECHNOLOGY

The technology keeps evolving to provide more and more benefits to its users, more use cases are developed and deployed.

ECOSYSTEM

The ecosystem keeps growing together, creating new adoption areas and building up a larger and larger SCION network.

SCION

ELEVATING SECURE COMMUNICATION

CREATING A SAFE CONNECTED WORLD

Together with our Members

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ENABLING THE SUCCESS OF THE ECOSYSTEM

How we are driving progress in four core areas

SPECIFICATION

We create the technical specifications to implement SCION, with the goal of ensuring interoperability and keeping the ecosystem open. We represent the SCION community at standards development venues such as the IETF.

OPEN SOURCE

We coordinate and maintain a SCION implementation for research, development, and experimental deployments.

BRAND & COMMUNITY

We raise awareness of the benefits and features of SCION while fostering an actively engaged community.
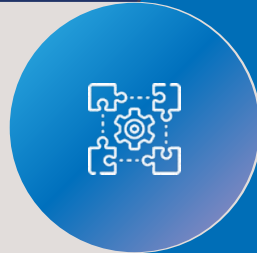
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SCION SPECIFICATION

A big step towards global adoption

INTEROPERABILITY

Multiple implementations ensuring compatibility.

BETTER TECHNOLOGY
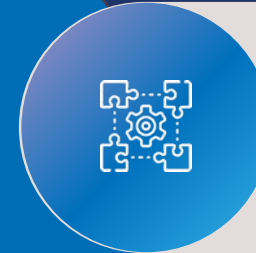
Multiple Wider community review by renowned experts and global recognition.

OPEN ECOSYSTEM

Anyone can succeed with a clear specification.

CERTIFICATION

Fundamental for a certification program.

SCION
ELEVATING SECURE COMMUNICATION
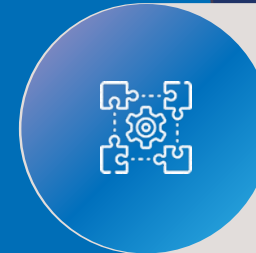
WHAT IS OUR ROLE?

Standardization technical committee

SCION draft specification (see: datatracker.ietf.org)

Representation at standardization development organizations

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HOW CAN MEMBERS GET INVOLVED WITH THE SPECIFICATION?

Define future protocol evolution

STANDARDIZATION COMMITTEE

Be informed with timely updates on the latest developments with the SCION protocol and its IETF specification.

Shape together the future of the SCION specification and of its journey through IETF/IRTF.

Join us at IETF meetings worldwide for collaboration, hackathons opportunities.

NICOLA RUSTIGNOLI
Chair, SCION Association

FRITZ STEINMANN
SIX Group

ROGER LAPUH
Extreme Networks

WILLIAM BOYE
Swiss National Bank

SAMUEL HITZ
Anapaya

JUAN GARCIA PARDO
ETH Zurich

MIKAEL HOLMBERG
Extreme Networks

TONY JOHN
OvG Magdeburg

SIMON LEINEN
Switch

JONAS BEHRING
Swisscom

KEVIN MEYNELL
SCION Association

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SCION OPEN SOURCE

Fostering a healthy community with transparency and collaboration at its heart

WHAT IS OUR ROLE?

- Custodians of the open-source SCION implementation.
- Actively contribute to software development projects.
- Support through code contribution reviews.
- Provide documentation.
- Define the open-source roadmap.
- Organize member community meetings.

WHY DO WE DO THIS?

- To make sure the SCION ecosystem can rely on a stable, quality reference implementation.
- To have a vendor-independent, low-barrier entry point to SCION.
- To ensure that there are multiple software options for SCION adopters.

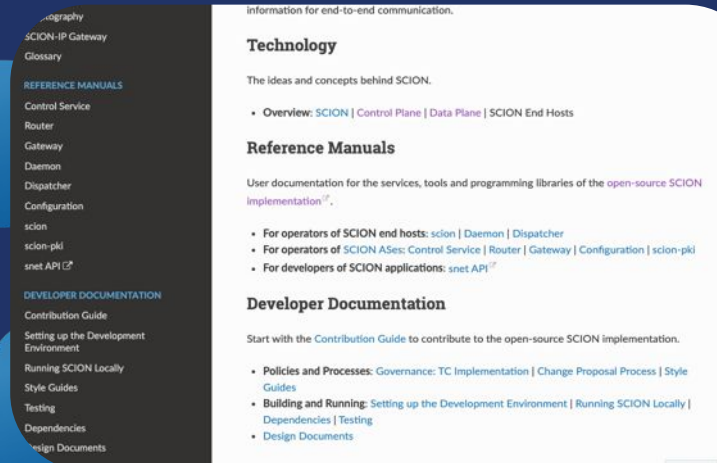# HOW CAN MEMBERS GET INVOLVED WITH IMPLEMENTATION?

Unlock exclusive benefits

IMPLEMENTATION COMMITTEE

Opportunity to contribute to the development of the SCION open source.

Have a direct say in determining the next steps of SCION's progress

Participate in hackathon projects at worldwide events.

JC HUGLY
Chair, SCION Association

KATYA TITKOVA
SCION Association

ROMAN SCHARKOV
SCION Association

MARC FREI
ETH Zurich

DOMINIK ROOS
Anapaya

JORDI SUBIRA NIETO
ETH Zürich

MARKUS LEGNER
Mysten Labs

FRANCOIS WIRZ
ETH Zurich
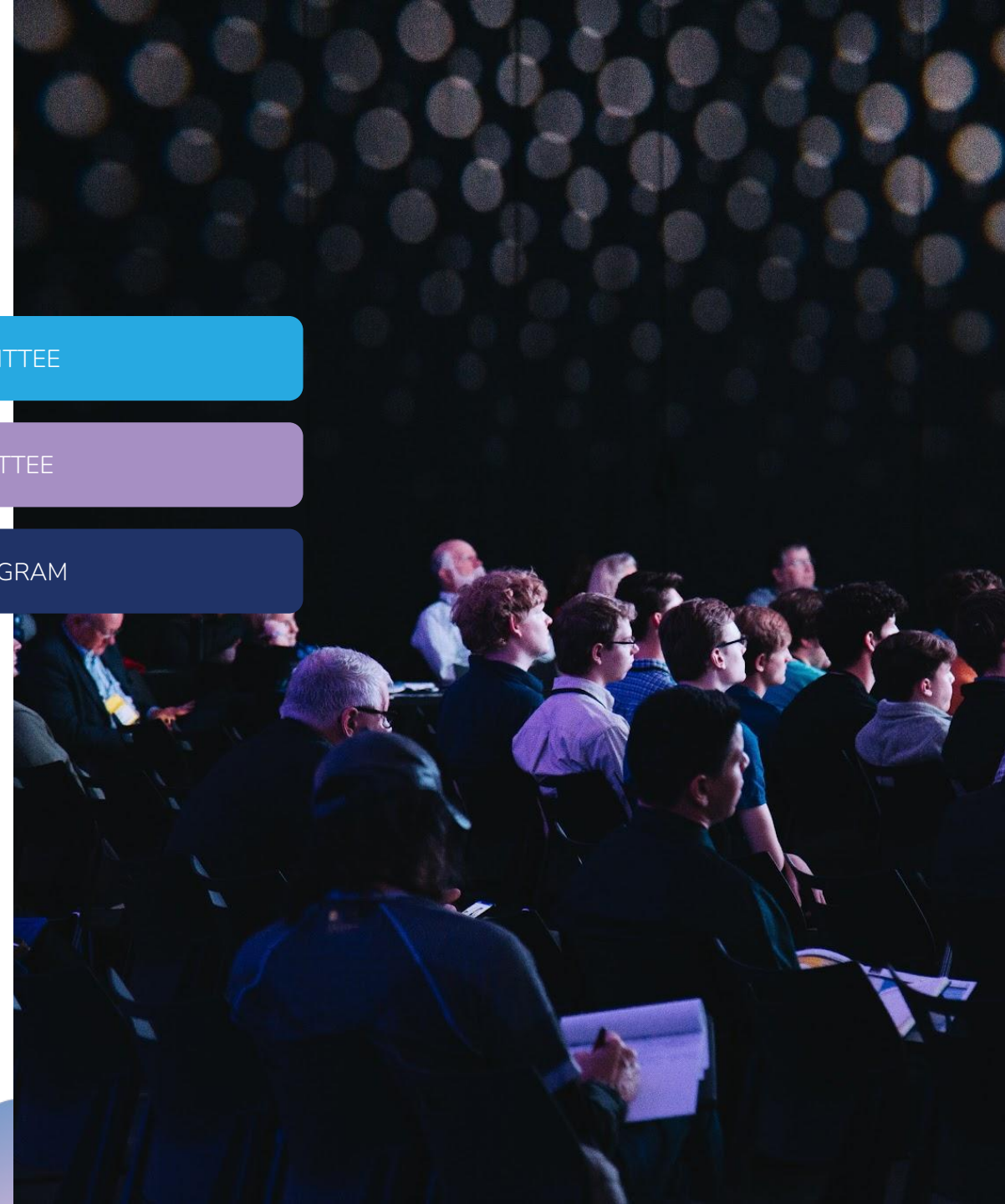
LUKAS VOGEL
Anapaya

TILMANN ZÄSCHKE
ETH Zürich

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SCION BRAND & COMMUNITY

Spreading the SCION story worldwide

MARKETING COMMITTEE

ADOPTION COMMITTEE

AMBASSADOR PROGRAM

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MARKETING COMMITTEE

Unlock exclusive benefits

Get your products recognizable thanks to the SCION brand and trademark.

Enhance your marketing impact with co-branded campaigns and gain valuable insights into the success of campaigns led by other members.

Participate in joint events in Switzerland and abroad and get exposure.

IVONNE CANO HÄLG

Anapaya

CÉLINE MAYER

Cyberlink

PATRICIA MEYRE

Axpo Systems

JULIA TRUNKWALTER

Sunrise Business

KATARINA GARIC

Chair, SCION Association

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ADOPTION COMMITTEE

Expanding the SCION ecosystem

Identify SCION use cases, benefits, challenges and business models – develop market analysis.

Identify sectors for future SCION adoption and how these can be developed - connect to stakeholders, industry bodies & international initiatives.

Define and document best practices for SCION deployment - e.g. ISD governance, adoption playbook.

CORNELIUS DORN
Six Group

PATRICK BOLLHALDER
Anapaya

DAVID HAUSHEER
OVGU Magdeburg

FRITZ STEINMANN
SIx Group

URS FISCHER
HIN

ANDREAS QUADT
Eraneos

KEVIN MEYNELL
Chair, SCION Association

STEPHAN ULRICH
Cyberlink

CHRISTIAN ETTER
Sunrise Business

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SCION AMBASSADORS

Affiliation to one of the members of the SCION Association is required to become a SCION ambassador

YOUR ROLE

- Speaking at SCION industry events
- Contributing to webinars, and blogs
- Offering insights on SCION applications in specific markets
- Engaging with current and potential users
- Crafting business cases for SCION adoption
- Delivering SCION training (tutorials, workshops, online)
- Advising on policy and regulations relevant to SCION
- Promoting SCION Association membership

THE PERKS

- Become a SCION thought leader
- Drive innovation and positive change
- Exposure on global stages with an exciting technology
- Free use of the SCION logo in relation to your role

TECHNICAL SKILLS

- Knowledge of telcos, network security, Internet routing and SCION
- Willingness to be a national, regional or sector specific expert, and how SCION can offer solutions
- Skilled in technical training delivery, including to non-technical audiences.

BUSINESS SKILLS

- Ability to explain the business value of SCION to different stakeholders, including commercial companies, governments, and other public sector organizations
- Understanding the needs of target markets and how SCION can help
- Track record in developing customer relationships for Internet products and services

SCION ASSOCIATION

OUR MEMBERSHIP MODEL

Join a vibrant community, be a catalyst for change!

SCION
ASSOCIATION

SCION ASSOCIATION MEMBERS

SUPPORTER MEMBERS

ETHzürich

SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK

DR. ULI SIGG
As a private individual

SIX

ADOPTER MEMBERS

ANAPAYA

axpo

cyberlink

DIGITAL REALTY™

DIDAS

eraneos

ETH Foundation

libC TECHNOLOGIES

OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

MystenLabs

Sunrise BUSINESS

swisscom

Swiss Finance + Technology Association

Switch

Zürcher Kantonalbank

SCION ASSOCIATION

MEMBERSHIP & BENEFITS

	ADOPTER	COMMUNITY	SUPPORTER

- Use of SCION wordmark & logo in marketing & products for commercial use (free for academia)
- Be listed as a SCION provider on www.scion.org
- *Free SCION AS number assignment**
- Access to discounted sponsorship packages for SCION Day
- Opportunity to join all our Committees subject to BoD approval
- Be part of general assembly, voting rights (excl. free tiers)

| ✓ | ✓ | ✓ |

- Be featured at SCION Day for free
- *Marketing starter package (including basic messaging)**
- Access to Marketing and Adoption Committees by default

| | ✓ | ✓ |

- Reduce risk and protect your SCION investment by supporting our efforts towards open source maintenance and standardization
- Custom joint events or articles under the SCION banner, including dedicated Marketing support
- Upon request, possibility for dedicated open source development support
- Right to join the Standardization and Implementation Committees by default
- *Certification discount**
- Access to SA boards/leadership for strategic discussions/guidance

| | | ✓ |

* Coming soon

| CHF / Year | 10k | 40k | SILVER GOLD PLATINUM
80k   160k   300k |

ASSOCIATE MEMBERSHIP

A "lightweight", free membership tier

FOR WHOM?

- Non-for profits
- Academic institutions
- Government organizations and regulatory bodies

BENEFITS

- Be listed on www.scion.org
- Attend member meetings/AGM (no voting rights)
- Use of SCION wordmark & logo in marketing & products for non-commercial use

WHAT IS EXPECTED

Ongoing free membership is contingent on regular participation and contribution:

- Contributions to our Committees or to open source projects
- Cross marketing, e.g. writing a blog post, hosting an event
- Contributions to SCION deployments
- Equivalent membership for SCION Association (if similar program exists)

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VALUE-BENEFITS FOR ISPs

Telecommunications providers, IXPs and NRENs

STANDARDIZATION

ADVANTAGES

- Define further use cases
- Make the technology better thanks to your feedback and experience
- Interoperability between networks is maintained

BENEFITS

- Reaffirm your role as an early adopter in a growing global SCION Internet
- Ge early insights into future technology evolution
- Guarantee long-term credibility of technology

OPEN SOURCE

ADVANTAGES

- Influence technology future developments

BENEFITS

- Explore new use cases
- Gain advantage with early insights into future technology developments

BRAND & COMMUNITY

ADVANTAGES

- Featured at events (e.g. SCION Day)
- Use of the SCION logo
- Listing on scion.org
- Marketing starter package

BENEFITS

- Connect with potential customers and like-minded companies
- Expand and accelerate market entry
- Lower entry barrier for your SCION offering
- Recognition by being an official SCION provider

THANK YOU

Time for questions!

SEND ME AN EMAIL

NICOLA RUSTIGNOLI
Co-CEO SCION Association

FOLLOW US

VISIT OUR WEBSITE

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