

STS ASSOCIATION CHAIRMAN'S REPORT

in review of the period 17 May 2016 to 15 May 2017

Final

1 STSA documents

A complete list of published documents are shown in the table below.

The yellow high-lights indicate those documents that changed or those that were newly added during the past year.

<u>Doc No</u>	<u>Ed</u>	<u>Stage</u>	<u>Description</u>
STS 101-1	1	PUB	Physical layer for virtual token carrier
STS 101-2	1.4	PUB	Physical layer for STS over DLMS/COSEM
STS 200-1	1.1	PUB	Generic classes for meter function objects
STS 201-15.1.0	1	withdrawn	Meter function object: RegisterTable
STS 201-15.1.1	1.1	withdrawn	Meter function object: RegisterTable
STS 201-15.1.2	1	withdrawn	Meter function object: RegisterTable
STS201-1	1	PUB	Meter function object: RegisterTable
STS 202-1	2.4	PUB	Currency token
STS 202-2	1.2	PUB	Group coded tokens for 2 and 4 digit man codes
STS 202-3	1.6	PUB	Addendum to IEC 62055-41 Ed 2
STS 202-4	1	PUB	Addendum to IEC 62055-52 Ed 1
STS203-1	1	PUB	Addendum to IEC 62055-41 Ed 2
STS 401-1	1.2	PUB	COP for the Allocation of Supply Group Codes
STS 401-2	1	PUB	COP for the registration of new members
STS 402-1	1.1	PUB	COP for the Management of Token ID Rollover
STS 403-1	1.1	PUB	COP for the Issuance of Manufacturer Codes
STS 404-1	1.1	PUB	COP for the Issuance STS tables
STS 405-1	1.2	PUB	COP for the Management of Key-changes for Sub Vendors
STS 406-1	1	PUB	COP for the Management of risk within the STS Association
STS 501 suite	1	withdrawn	Compliance test specification suite for electricity
STS 502 suite	1	withdrawn	Compliance test specification suite for water

STS 503 suite	1	withdrawn	Compliance test specification suite for gas
STS 521 suite	1	withdrawn	Compliance test specification suite for electricity 4 digit codes
STS 522 suite	1	withdrawn	Compliance test specification suite for water 4 digit codes
STS 523 suite	1	withdrawn	Compliance test specification suite for gas 4 digit codes
STS 531-0	1.7	PUB	Compliance test specification - Quality plan
STS 531-1-0-02	1.7	PUB	Compliance test specification - Entity type A for EA07
STS 531-1-0-04	1.7	PUB	Compliance test specification - Entity type A for EA11
STS 531-2-1	1.7	PUB	Compliance test specification - Entity type B
STS 531-3	1.7	PUB	Compliance test specification - Entity type C
STS 531-4	1.7	PUB	Compliance test specification - Entity type D
STS 531-5-0	1.7	PUB	Compliance test specification - Entity type E
STS 531-6-1-07	1.7	PUB	Compliance test specification - Entity type F for EA07
STS 531-6-1-11	1.7	PUB	Compliance test specification - Entity type F for EA11
STS 531-8-1	1.7	PUB	Compliance test specification - Entity type H
STS 531-8-2	1.7	PUB	Compliance test specification - Entity type H for DKGA04 and EA11
STS 531-10-02	1.8	PUB	Compliance test specification - Entity type H1
STS 531-10-04	1.8	PUB	Compliance test specification - Entity type H1
STS 600-4-1	1.1	PUB	Distributed Key Management System - initial specifications
STS 600-4-2	1.1	PUB	Distributed Key Management System
STS 1700-0	1	PUB	Working group charter
STS 1800-1-1	4	PUB	Handbook for members
STS 1800-1-2	5.1	PUB	Brochure - English
STS 1800-1-2-2	1	PUB	Brochure - French
STS 1800-1-2-3	1	PUB	Brochure - Portuguese
STS 1800-1-2-4	1	PUB	Brochure - Spanish
STS 1800-1-3	2	PUB	STS Synopsis
STS 1800-1-4	1	PUB	Explanatory notes for IEC 62055-41 Ed2
STS 1800-5	1	PUB	Disaster recovery procedure
STS 1900-1-1	1	withdrawn	Articles of Association (replaced by STS 1900-1-3)
STS 1900-1-2	1	withdrawn	Memorandum of Association (replaced by STS 1900-1-3)
STS 1900-1-3	1.1	PUB	Memorandum of Incorporation

STS 1900-2-1	1	PUB	License & Membership Agreement
STS 2000-1	1.3	PUB	Intellectual Property Rights
STS 2001-1	1	PUB	Competition law policy
STS 2002-1	1	PUB	Conflict of interest policy
STS 2003-1	1	PUB	Logo usage policy
STS 2100-1	1	PUB	Procedure for the development of standards and codes of practice
STS 2100-3	1.5	PUB	Procedure for STS Product Certification
STS 2100-4	2	PUB	Membership and Licence Holder processes

2 IEC TC57 standards of interest to Smart Grid integration

The following standards are of interest to parties wishing to integrate metering systems with ERP level systems or with 3rd party systems.

<u>Doc No</u>	<u>Ed</u>	<u>Stage</u>	<u>Description</u>
IEC 61850-8-4	1	PUB	DLMS/COSEM mapping to 61850 data models
IEC 61970-301	6	PUB	CIM base model
IEC 61968-1	3	DRAFT	Interface architecture
IEC 61968-2	2	PUB	Glossary
IEC 61968-3	2	FDIS	Network operations
IEC 61968-4	2	DRAFT	Asset management
IEC 61968-6	1	PUB	Maintenance + construction
IEC 61968-8	1	PUB	Customer support
IEC 61968-9	2	PUB	Meter reading + control
IEC 61968-900	1	PUB	Getting started with IEC 61968-9
IEC 61968-11	3	CDV	CIM for distribution
IEC 61968-13	2	CD	Model exchange
IEC 61968-14	1	PUB	CIM/Multispeak mapping
IEC 61968-100	1	PUB	Implementation profiles

3 IEC TC13 communication standards of interest to smart metering

The following standards are of interest to smart metering systems.

<u>Doc No</u>	<u>Ed</u>	<u>Stage</u>	<u>Description</u>
IEC 62056-1-0	1	PUB	Smart metering framework
IEC 62056-1-1	1	PUB	Template for communication profiles

IEC 62056-4-7	1	PUB	Profile for IPV4 networks
IEC 62056-5-3	3	CDV	DLMS/COSEM application layer
IEC 62056-6-1	3	CDV	DLMS/COSEM OBIS codes
IEC 62056-6-2	3	CDV	DLMS/COSEM Cosem interface classes
IEC 62056-6-9	1	PUB	CIM/DLMS/COSEM mapping
IEC 62056-7-3	1	FDIS	MBUS wired and wireless profile
IEC 62056-7-5	1	CDV	Direct local data exchange
IEC 62056-7-6	1	PUB	Profile for HDLC networks
IEC 62056-8-3	1	PUB	Profile for S-FSK PLC networks
IEC 62056-8-5	1	CDV	Profile for OFDM G3 PLC
IEC 62056-8-6	1	FDIS	Profile for high speed PLC
IEC 62056-8-8	1	CD	Profile for ISO/IEC 14908 series networks
IEC 62056-8-20	1	PUB	Profile for mesh networks
IEC/TS 62056-9-1	1	PUB	Profile for web-services
IEC/TS 62056-9-7	1	PUB	Profile for TCP-UDP/IP networks

4 IEC TC13 standards of interest to payment metering systems

The current status of the IEC TC13 WG15 documents is shown below.

<u>Doc No</u>	<u>Ed</u>	<u>Stage</u>	<u>Description</u>
IEC 62055-21	1	PUB	Standardization framework for payment systems
IEC 62055-31	1 Amt1	DRAFT	Type test for payment metering functions
IEC 62055-41	3	CDV	Application layer for STS
IEC 62055-42	1	DRAFT	Application layer for TRN
IEC 62055-51	1	PUB	STS physical layer for numeric and magnetic tokens
IEC 62055-52	1	PUB	STS physical layer for virtual token carrier

5 Liaison organizations

As a member of the DLMS UA the STS Association is able to participate in the development of new DLMS/COSEM specifications that have not yet been published in IEC TC13.

The STS Association is the Registration Authority on behalf of the IEC in support of the IEC 62055 STS suite of standards.

Informal liaison with IEC TC13 on smart metering standards is facilitated by Don Taylor who is a ZA expert on WG14 and WG15.

Informal liaison with IEC TC57 on smart grid standards is facilitated by Don Taylor

who is a ZA expert on WG14.

6 Distributed KMS project status

The first phase of the KMC600 software development is now released for production and is deployed in the STS KMC. The software is now available from Prism for deployment in other KMCs for those members and utilities who wish to establish their own KMC.

The upgraded HSM with STS6 protocol is also released for production, which supports the key change with TID rollover, vending key expiry and enhanced security algorithms as specified in IEC 62055-41 Ed3 and STS 600-4-2.

Phase two of the KMS project is anticipated to start during the coming year. This will facilitate the concept of a centralized repository for vending keys as a disaster recovery mechanism in the case where a particular KMC loses its vending keys.

7 Product certification and test tools

The STS 531 series certification test specifications are now in full production and are continuously being upgraded in support of developing standards and product variations.

The following test tools are available from the website.

- Virtual Security Module;
- STS Simulator;
- Virtual meter.

8 Administration

There were 6 Management Board meetings held to manage the operations of the STSA. The travel and time cost of these meetings and the time spent on STSA business is still being borne by the office bearers, except for those of the Secretariat, Technical Consultant and independent co-opted director.

The management team for the past year:

Name	Representing
Andy Stoner	Landis + Gyr (retired)
Dave Tarr	Landis + Gyr (replaces Andy Stoner)
Deon van Rooi	Eskom
Richard Mccurrach	Eskom (alternative for Deon van Rooi)
Don Taylor	Itron
Lance Hawkins-Dady	Conlog
Jean Venter	Secretariat
Kobus van den Berg	Association of Municipal Electricity Utilities
Franco Pucci	Technical Consultant
Lebina Tsepe	Vending system manufacturers
Shawn O'Neill	HSM manufacturers

Andy Stoner formally retired as representative for Landis + Gyr following his retirement from employment with Landis + Gyr. We thank him for his valuable contribution made during the many years of service in his role as a director of the STS Association and serving on the management board.

Dave Tarr was formally appointed as the Landis + Gyr representative as a director on

the management board of the STS Association serving as replacement of Andy Stoner. We welcome Dave and look forward to his valuable input to the affairs of the STS Association.

Subsequent to his retirement, Andy Stoner accepted a unanimously supported invitation by the management board and was thus appointed as a co-opted independent director to serve on the management board. With many years of prior experience as a director of the STS Association, we are fortunate to have Andy back on board – welcome back Andy.

We also welcome Richard Mccurrach on board, appointed by Eskom as alternative representative to Deon van Rooi.

9 Legal and Constitutional

The STS Association has acquired the intellectual property rights relating to the API specifications relevant to the various hardware secure modules manufactured by Prism, past and present.

These specifications will be published shortly as STS open specifications, which will allow members to develop and manufacture their own HSM devices without license constraints as was the case in the past.

10 Financial

An audited financial report is tabled at the AGM.

11 Membership status

(As at 15th May 2017 in alphabetical order)

	<u>Members without voting rights</u>	<u>COUNTRY</u>
1	Adroit Metering Services Ltd	Nigeria
2	Anta Mediakom	Indonesia
3	Arthur D Riley & Co. Ltd	New Zealand
4	Baylan Meters	Turkey
5	Beijing Banner Electric Co., Ltd.	China
6	Cashpower Sudamericana S.A	Argentina
7	ChinaSoft International	China
8	Chinasoft International Technology Services Ltd	China
9	Circutor SA	Spain
10	CITIQ Meter Solutions	South Africa
11	Contact Energy Ltd	New Zealand
12	Contour Technology (Pty)Ltd	South Africa
13	Daesung Measuring Co., Ltd	Korea
14	EDMI Shenzhen Co., Ltd	China
15	Electricité de Madagascar	Magagascar
16	EMS Invirotel Energy Management (PTY) LTD	South Africa

17	Enbaya Prepaid Meters CC	South Africa
18	ENEL d.o.o.Beograd	Serbia
19	ENT Korea	Korea
20	e-Solutions (Pvt.)Ltd	Zimbabwe
21	Global Evolution Lighting	Tunisia
22	Hangzhou Meteronic Technology Co., Ltd	China
23	Hangzhou Shanergy Metering Co., Ltd	China
24	Hangzhou Zone Electric Co., Ltd	China
25	Hardware Development Section E & D Advanced Electronic Company	Saudi Arabia
26	Hexing Technology Company Limited	Kenya
27	Holistic Systems	South Africa
28	Hydro Ingenierie Etudes Et Realisations	Madagascar
29	ID2 Infastructure Systems Pty Ltd	South Africa
30	Indra Sistemas S.A.	Spain
31	Inhemeter Africa Company Limited	Kenya
32	Innovation Renewable Energy	Qatar
33	International Utility Brokers	South Africa
34	iSoftstone Technology Service Company Limited	China
35	Itron Gmbh	Germany
36	Jager Technologies Pty Ltd	South Africa
37	Jiaxing Xinghao Instrument Co., Ltd	China
38	Kani Smart Works (Pty) Ltd	South Africa
39	Kepid Amstech Co Ltd	Korea
40	Larsen & Toubro Limited	India
41	LL Energy cc	South Africa
42	Metro Prepaid (Pty) Ltd	South Africa
43	Metsec Cables Ltd	Kenya
44	Neat Prepaid Limited	Mauritius
45	Netelek Pty Ltd	South Africa
46	netVendor cc	South Africa
47	Ningbo Jianan Electronics Co., Ltd	China

48	Ningxia LGG Instrument Co., Ltd	Indonesia
49	North Smart Equipment Co., Ltd	China
50	Nuri Telecom Co., Ltd	Korea
51	Power Measurement & Distribution cc	South Africa
52	Prepaid World	South Africa
53	Protea Metering Pty Ltd	South Africa
54	PT Pertagas Niaga	Indonesia
55	PT. Cannet Elektrik Indonesia	Indonesia
56	Qingdao iTechene Technologies Co., Ltd.	China
57	Remote Metering Solutions (Pty) Ltd	Ghana
58	Renesas Electronics Singapore Pte Ltd	Singapore
59	Secure Meters Limited	India
60	Shanghai Jinling Intelligent Electric Meter Co., Ltd	China
61	Shenzhen Golden Square Technology Co., Ltd	China
62	Shenzhen Hemei Group Co., Ltd	China
63	Shenzhen Hexcell Electronics Technology Co., Ltd	China
64	Shenzhen Kaifa Technology (Chengdu) Co., Ltd	China
65	Shenzhen Star Instrument Co.,Ltd	China
66	Shenzhen Techrise Electronics Co., Ltd	China
67	Siemens	South Africa
68	SKYRUN ELECTRIC SMART METERING SYSTEMS AND SOLUTIONS(NIG.) LTD	Nigeria
69	Standard Communication Ltd	Nigeria
70	TBEA Co.,Ltd.	China
71	TBEA Nanjing Intelligent Electric Co., Ltd.	China
72	Telbit	South Africa
73	The Meter Man	South Africa
74	Tinuten Nigeria Limited	Nigeria
75	Urbanise Com (Pty) Ltd	South Africa
76	Utiliflex LLC	USA
77	Utility Systems	South Africa
78	Wuhan Radarking Electronics Corp.	China

79	Zhejiang Amite New Energy Co., Ltd	China
80	Zhejiang Gomelong Meter Co., Ltd	China
81	Zhejiang Huayi Electronic Co.,Ltd.	China
82	Zhejiang Songxia Electric Meter Co., Ltd	China
83	Zhejiang Xintuo New Energy Co., Ltd	China
84	Zhuhai Yujian Science and Technology Co., Ltd	China

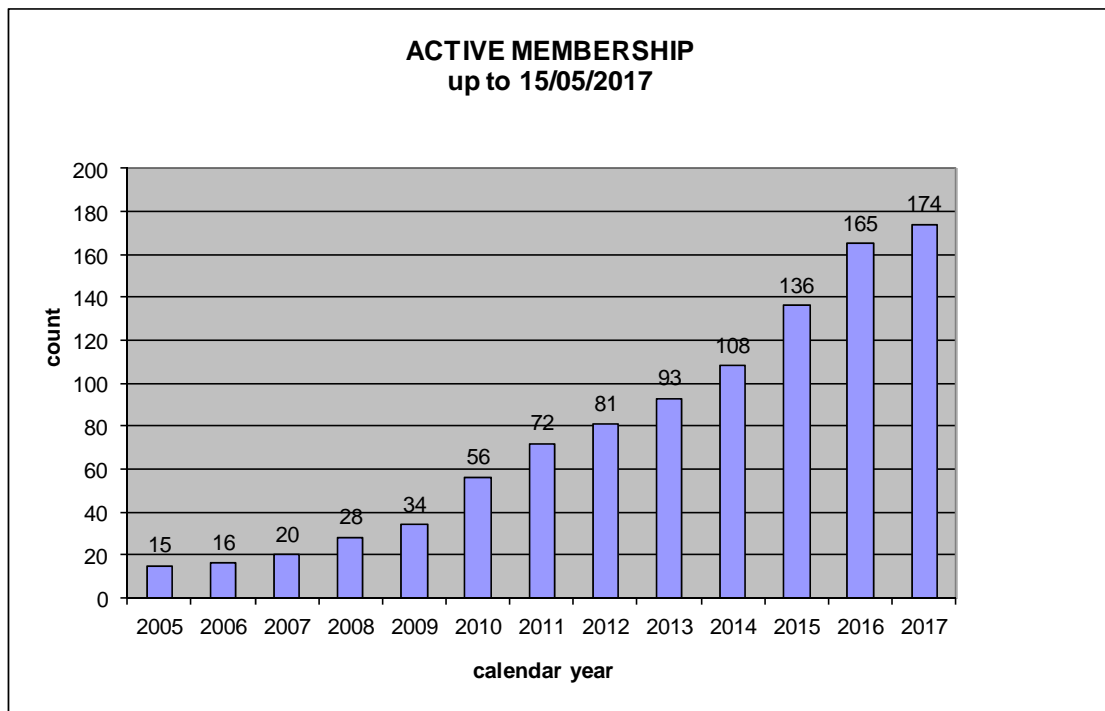
	<u>Members with voting rights</u>	<u>COUNTRY</u>
1	ADD Production	Moldova
2	Amanzi Meters (Pty) Ltd	South Africa
3	Apator SA	Poland
4	Beijing Xiaocheng Technology Stock Co.,Ltd	China
5	Conlog (Pty) Ltd	South Africa
6	DaroMix (Pty) Ltd t/a Shanghai Xielin Sa (Pty) Ltd	South Africa
7	EDMI Ltd	Singapore
8	Egyptian Smart Meters Company	Egypt
9	Elsowedy Electrometer Egypt	Egypt
10	Empire Hexing Africa Pty Ltd	South Africa
11	Eskom Holdings SOC Limited	South Africa
12	Excelec International S.A.S	Colombia
13	Ganz Meter Company Ltd. (Itron Hungary)	Hungary
14	Genus Power Infrastructures Limited	India
15	Grinpal Energy Management Pty Ltd	South Africa
16	Hangzhou Laison Technology Co., Ltd	China
17	Hangzhou Sunrise Technology Co., Ltd	China
18	Hangzhou Xili Watthour Meter Manufacture Co., Ltd	China
19	Hexing Electrical Co., Ltd.	China
20	Hodi Technologies Limited Company	China
21	Holley Technology Ltd	China
22	HPL Electric and Power Pvt. Ltd	India
23	Huawei Technologies Co., Ltd	China

24	Huizhou Zhongcheng Electronic Technology Co., Ltd	China
25	Ice-Cloud Virtual Products Logistics (Pty) Ltd	South Africa
26	Incotex Systems Ltd	Bulgaria
27	iPay Pty Ltd	South Africa
28	Iskraemeco Energy Measurement	Egypt
29	Itron Metering Solutions South Africa (Pty) Ltd	South Africa
30	Janz Contadores de Energia SA	Portugal
31	Jiangsu Linyang Energy Co., Ltd	China
32	Jiangsu Suyuan Jierui Ammeter Co., Ltd	China
33	Kamstrup	South Africa
34	Keahile Communications cc	South Africa
35	Landis + Gyr	South Africa
36	Lee Jong Electrical Co. Sdn. Bhd.	Brunei Darussalam
37	Longshine Technology Limited Company	China
38	MBH Power and Gas Limited	Ghana
39	Meter Mate Prepaid Electric Meters cc	South Africa
40	Microstar Electric Company Limited	China
41	Middle-South Meter Co., Ltd	China
42	Nanjing New Yuneng Technology Co., Ltd	China
43	Nari-Tech Sanneng Instrument (Nanjing) Co., Ltd	China
44	Ningbo Sanxing Smart Electric Co., Ltd	China
45	Nyamezela Metering	South Africa
46	Pivot Access	Rwanda
47	PowerCom Metering Africa (Pty) Ltd	South Africa
48	Prism Payment Technologies (Pty) Ltd	South Africa
49	PT GERBANG SINERGI PRIMA	Indonesia
50	PT Industri Telekomunikasi Indonesia	Indonesia
51	PT Mandiri Solusindo Perkasa	Indonesia
52	PT Mecoindo - Itron	Indonesia
53	PT Melcoinda	Indonesia
54	PT PLN (Persero)	Indonesia

55	PT. EDM I Indonesia	Indonesia
56	PT. Fuji Dharma Electric	Indonesia
57	PT. Panggung Electric Citrabuana	Indonesia
58	PT. Sistem Mikroelektronika Cerdas Co-Design	Indonesia
59	PT. Smart Meter Indonesia	Indonesia
60	Qingdao Topscomm Communication Co., Ltd	China
61	Quill Associates	South Africa
62	SABRUD Consortium Nig. Ltd	Nigeria
63	Sagemcon Energy & Telecom SAS	France
64	SARL As Consulting	Cote D'ivoire
65	Sebata Municipal Solution (Pty) Ltd	South Africa
66	Sectional Title Support Services (Pty) Ltd	South Africa
67	SGrid International Co., Ltd	China
68	Shenzhen Calinmeter Co., Ltd	China
69	Shenzhen Clou Electronics Co., Ltd	China
70	Shenzhen Constant Electronics Co., LTD	China
71	Shenzhen Inhemeter Co., Ltd	China
72	Shenzhen Londian Electrics Co., Ltd	China
73	Shijiazhuang Kelin Electric Co., Ltd	China
74	SIAME	Tunisia
75	Sudanese Electricity Distribution Co. Ltd	Sudan
76	Syntell (Pty) Ltd	South Africa
77	Techno Electricals Limited	Dhaka
78	Unistar Hi-Tech Systems Limited	Nigeria
79	Universal Microelectronics Co., Ltd	Taiwan
80	Wasion Group Limited	China
81	XJ Metering Co., Ltd	China
82	Yantai Dongfang Wisdom Electric Co., Ltd	China
83	Zhejiang Chint Instrument & Meter Co., Ltd	China
84	Zhejiang Hengye Electronics Co., Ltd	China
85	Zhejiang Joy Electronic Technology Co., Ltd	China

86	Zhejiang Risesun Science and Technology Co., Ltd	China
87	Zhejiang Tepsung Electric Meter Co.,LTD	China
88	Zhejiang Wellsun Intelligent Technology Co.,Ltd.	South Africa
89	Zhejiang Yongtailong Electronic Co., Ltd	China
90	ZTE Corporation	China

Membership growth



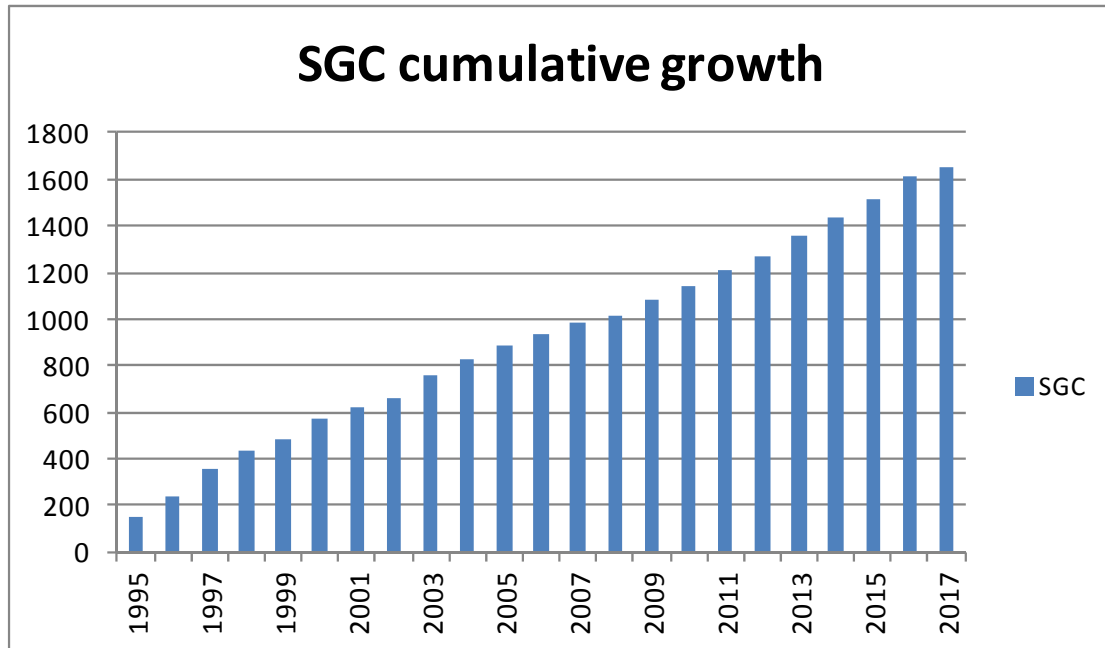
Membership by country as on 15 May 2017

(Ordered by weight)

	<u>COUNTRY</u>	<u>QTY</u>
1	China	63
2	South Africa	42
3	Indonesia	15
4	Nigeria	6
5	India	4
6	Korea	4
7	Egypt	3

8	Kenya	3
9	Ghana	2
10	Madagascar	2
11	New Zealand	2
12	Singapore	2
13	Spain	2
14	Tunisia	2
15	Argentina	1
16	Brunei Darussalam	1
17	Bulgaria	1
18	Colombia	1
19	Cote D'ivoire	1
20	Dhaka	1
21	France	1
22	Germany	1
23	Hungary	1
24	Mauritius	1
25	Moldova	1
26	Poland	1
27	Portugal	1
28	Qatar	1
29	Rwanda	1
30	Saudi Arabia	1
31	Serbia	1
32	Sudan	1
33	Taiwan	1
34	Turkey	1
35	USA	1
36	Zimbabwe	1
	TOTAL	174

12 STS deployment



- 1649 SGC keys hosted by the KMC
- 102 countries are using STS products
- 34 out of 83 IEC countries are using STS products
- 630 products are STS certified
- 155 manufacturing codes have been allocated.

- End of report -

Don Taylor
Chairman ,STS Association
15th May 2017.