

SADC Conformity & Interoperability Test Centres



SADC Meeting

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Background [1/2]

- ❖ The SADC is aware of the catalytic and instrumental impact a Conformance and Interoperability (C&I) Test Centre will have on the ICT sector in respect to regional integration in the SADC region.
- ❖ The high rate of uptake of ICT services has resulted in a high influx of consumer devices and network equipment. Very limited testing in undertaken.
- ❖ There is an urgent need to expedite the deployment of SADC C&I Test Centres.
- ❖ SADC C&I Test Centres will build consumer's trust and confidence in tested ICT products to ensure high quality performance and consequently reinforce the ICT business environment.
- ❖ Interoperability testing will bring about economic benefits through business stability, scalability and cost reduction systems, equipment and tariffs.
- ❖ SADC C&I Test Centres will assist in bridging the standardisation gap and reduce the digital divide in the region.

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Background [2/2]

- ❖ In June 2013 SADC Secretariat made a request to the International Telecommunication Union (ITU) for assistance for the eventual setting up of a SADC C&I Test Centre.
- ❖ ITU had started implementing a Conformance and Interoperability Programme for Africa.
- ❖ ITU undertook an assessment on C&I in the SADC Region, covering among other issues, the regulatory framework and Institutions, accreditation, laboratories, certification bodies and marking, and recommendations for establishing common C&I Programme and Mutual Recognition Agreements (MRAs).
- ❖ A Validation Workshop for the survey was convened from the 13th to 15th October 2014 in Livingstone, Zambia.

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SADC C&I Survey Findings

The findings from the survey on C&I in the SADC Region were:

- ❖ Lack of capacity and infrastructure for an effective conformance assessment regime;
- ❖ With the exception of South Africa, the other SADC Member States have no test labs and a certification body;
- ❖ Lack of MRA co-ordination;
- ❖ Lack of capacity in the development and implementation of frameworks and regulations for conformance assessment; and
- ❖ The huge economy, high literacy rate and large telecommunications market of South Africa makes it an attractive destination for setting up an accredited test lab. The Government with relatively more resources available has the ability to set up a certification body and also to build up capacity for conformity assessment.

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ITU Recommendations [1/3]

The workshop recommended that SADC forms a C&I Committee to be chaired by the SADC Secretariat to undertake the following tasks:

- ❖ Develop a Plan for the establishment of SADC In-Country C&I Testing Laboratories. This plan shall include the criteria to determine the locations and the testing scopes of these in-country C&I Testing Laboratories
- ❖ **Reference:** *Feasibility Study for a Conformance Testing Center.*
- ❖ Develop a Plan for the establishment of Regional C&I Testing Laboratories. This plan shall include the criteria to determine the numbers, locations and testing scopes of these Regional C&I Testing Laboratories.
- ❖ **Reference:** *Guidelines for Developing Countries on establishing conformity assessment test labs in different regions.*

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ITU Recommendations [2/3]

- ❖ Develop a Plan for the Establishment of a SADC MRA Framework similar to the Asia Pacific Economic Cooperation Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (APEC TEL MRA) covering 21 economies in the Asia Pacific region. This plan shall preferably include the creation of a small SADC MRA Task Force which can adapt the APEC TEL MRA to meet specific requirements of the SADC Region. In implementing the SADC MRA, Members States shall become signatories to this multilateral arrangement in the SADC Region. Participation in the SADC MRA is voluntary. The SADC MRA Model may be adopted by other RECs in Africa.
- ❖ **Reference:** *Guidelines for the development, implementation and Management of Mutual Recognition Agreements (MRAs). Establishing Conformity and Interoperability Regimes: Basic Guidelines.*

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ITU Recommendations [3/3]

- ❖ In order to establish a Training of Trainers (TOT) Programme to build capacity for SADC Member States it was recommended to identify institutions (Conformity Assessment Bodies) in the SADC Region that may be in a position to provide qualified training courses on C&I in the framework of an MOU signed with ITU as undertaken in other Regions.
- ❖ The SADC Secretariat may facilitate this by liaising with appropriate institutions that would sign an MOU with the ITU.

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Livingstone Validation Workshop Follow up [1/2]

- Follow up of the SADC Assessment Study as well as of the concerned endorsement of the SADC Ministerial meeting that was held afterward in Malawi which endorsed the outcomes and recommendation coming from the final workshop held in Livingstone in October, 2014.
- SADC received Commitment by the Ministerial meeting held in Mangochi, 21st November 2014.
- The Ministers approved the establishment of the SADC Conformity and Interoperability (C&I) Committee to develop a Plan for the Establishment of SADC In-Country and Regional C&I Testing Laboratories and a Plan for the Establishment of a SADC Mutual Recognition Agreement (MRA) Framework for Conformity Assessment of Telecommunications Equipment.
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Livingstone Validation workshop Follow up [2/2]

- The SADC C&I Committee shall be composed of representatives from the SADC Secretariat (Chairman of the Committee), SADC Implementing Agencies CRASA and SATA and one member from each SADC Member State.
- The Ministers' meeting urged Member States to submit to the SADC Secretariat their nominations before the 16th January 2015. They also encouraged Member States to participate more actively in surveys that are undertaken by entities/partners from which assistance has been requested by the SADC Secretariat in response to decision of the Ministers.

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In-Country C&I Test Lab [1/4]

- ❖ To encourage SADC Member States to establish their own National C&I Test Laboratories. The ITU can provide the necessary Technical Assistance upon request from Member States.
- ❖ Africa is the only region without any accreditation scheme similar to International Laboratory Accreditation Cooperation (ILAC) and the implementation of a Mutual Recognition Agreement (MRA) may take time. A possible approach would be to start deploying In-Country (National) C&I Test Labs in SADC Member States in order to build capacity and know how in the area of instrumentation, lab management, quality and instrumentation purchasing process (quality and instrumentation maintenance). This may lead to Member States developing these National C&I Test Labs becoming references for their respective technology (domain) testing area in the SADC Region.

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In-Country C&I Test Lab [2/4]

- ❖ The testing scopes of the In-Country C&I Testing Laboratories should complement each other in order to provide maximum scope coverage within the SADC Region.
- ❖ Tables A and B may be used as a guide for the selection of the technology (domain) testing area for the National C& I Test Labs. Table A provides indicative office floor requirements and cost factors. Table B provides an indicative ranking by ITU Experts on the relevance of the technology testing area, taking into account the cost aspect.

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In-Country C&I Test Lab [3/4]

Lab	Activity	Rationale	Usefulness	Cost	Total
SAR	SAR	To verify the quality of mobile terminals for health reasons	12	6	18
PWR	Powering consumption lab	Critical powering conditions either for main supply conditions and quality of equipment	8	9	17
QML	Quality of material lab	To verify the quality of equipment in severe environmental conditions (temperature humidity, fog salt)	5	11	16
WIF	Personal area network lab	Important to verify WIFI. Very common in SADC	6	8	14
EPS	Electrical safety & protection lab	Critical powering conditions either for main supply conditions and quality of equipment	9	5	14
EMC	Electromagnetic compatibility lab	To verify the emitted and conducted radiations in low quality equipment	10	3	13
RSL	Radio Signalling lab	& To verify the quality of radio part of mobile terminals in low quality mobile equipment	11	2	13
VAS	Mobile value added services lab	Not useful in SADC	0	12	12
ELA	Electroacoustic lab	To verify audio quality in mobile terminals	4	7	11
USX	User experience lab	Not useful in SADC	0	10	10
BBA	Broadband access lab	To verify the quality of broadband lines in emerging fixed market	5	4	9
TPF	Fixed Test plant	Too complex and expensive, useful only for big test center	0	1	1

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In-Country C&I Test Lab [4/4]

Laboratories	Activity	m ²	Location Rent 1000 EUR/year	Utility 1000 EUR/year	Instrument Asset 1000 EUR	Number of Staff	Instrument Opex 1000 EUR/year
SAR	Specific absorption rate lab	150	19	28	800	4	25
USX	User experience lab	130	17	24	100	6	0
BBA	Broadband access lab	300	39	56	1.400	7	5
VAS	Mobile value added services lab	40	5	7	0	3	0
EPS	Electrical safety and protection lab	80	10	15	1.200	4	25
ELA	Electroacoustic lab	250	32	46	800	4	5
EMC	Electromagnetic compatibility lab	300	39	56	1.600	5	5
RSL	Radio and signalling lab	250	32	46	2.000	12	10
PWR	Powering consumption lab	80	10	15	200	2	5
QML	Quality of material lab	250	32	46	1.300	6	15
WIF	Personal area network lab	170	22	31	500	5	5
TPF	Fixed test plant	900	117	167	3 000	33	120
TPH	Mobile test plant	2 500	324	463	3 000	55	300
management						10	
cross activities (*)						24	
TOTAL		5 400	700	1 000	15 900	180	520

(*) Cross activities: Project office, ICT management, quality, secretariat

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Regional C&I Test Centres

- ❖ The criteria for selecting Member States to establish Regional C&I Test Centres are:
 - ❑ Countries belonging to a geographic region;
 - ❑ Countries sharing technical and/or economic interests;
 - ❑ Countries which have established Accreditation Bodies which are signatories to ILAC MRA;
 - ❑ Countries which have metrology institutes to provide calibration services;
 - ❑ Synergism between the stakeholders - equipment vendors/standards development organizations/network operators/test centres; and
 - ❑ Funding support from both public and private sectors.

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Proposed Plan for a SADC Framework MRA

- ❖ SADC to form a Task Force to develop a SADC Framework MRA (SADC MRA). This Task Force will be chaired by SADC and supported by the SADC Secretariat. ITU/BDT will provide technical assistance to the Task Force.
- ❖ The proposed SADC MRA will be based on existing and operational Framework MRA, namely the APEC TEL MRA covering 21 economies in the Asia Pacific region. The SADC MRA Task Force shall adapt the APEC TEL MRA if required to meet specific SADC requirements mostly in the administrative areas.
- ❖ To implement the SADC MRA, SADC Member States shall develop specific bilateral MRAs with their partners. Participation in the SADC MRA is voluntary. When SADC Member States decide to participate they will have to follow the principles and procedures of the SADC MRA.
- ❖ The SADC MRA may be expanded to cover other African regions.

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Way Forward

- ❖ SADC to further collaborate with ITU



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Thank you for your kind attention



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