



**TERMS OF REFERENCE FOR THE SOUTH
AFRICAN 5G FORUM**

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1. Constituting the 5G Forum

- 1.1. The South African Fifth Generation Mobile Technology Forum ("the 5G Forum") is constituted in terms of section 17(1) of the Independent Communications Authority of South Africa Act No.13 of 2000, as amended ("the ICASA Act").

2. Background

- 2.1. As internet usages are proliferating communications networks are faced with new shortcomings. Future networks will have to support in 2020 and beyond mobile traffic volumes 1000 times larger than today and a spectrum crunch (access and backhaul) is anticipated. The vision of the fifth generation of mobile technology (5G) is to address the demands and business contexts of 2020 and beyond. The forecasts points to the following challenges:
 - 2.1.1. Global mobile-data traffic is expected to increase by orders of magnitude in the next decade.
 - 2.1.2. Massive growth in connected devices (50 billion devices in 2020).
 - 2.1.3. Wide range of use cases and requirements (device to device communication, car to car communications).
 - 2.1.4. Very dense crowd of users (sports stadiums, open air festivals)
 - 2.1.5. Demand for services in high mobility environment (e.g. trains travelling at speeds in excess of 300km/h)
- 2.2. To address these challenges there is an increasing exploratory research activities around the world towards a common 5G platform. Though today there is no 5G standards there is strong consensus in the industry as to what 5G should be in terms of performance. 5G promises to deliver on the following:
 - 2.2.1. An increase in capacity by a factor of 1 000;
 - 2.2.2. The data rates going up to 50 kbit/s for low mobility, 5 Gbit/s for high mobility and 1 Gbit/s anywhere;
 - 2.2.3. A decrease in latency to less than 1 ms (it is 5-10 ms in LTE), and

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2.2.4. A reduction in energy consumption by a factor between 10 and 100.

2.3. The key enabling technologies in order to achieve these targets will be twofold:

2.3.1. Enhancements to LTE, and

2.3.2. Specification of completely new radio access technologies.

Regarding the first, LTE enhancements will include the deployment of dense, smaller cells and may include other general enhancements like the combined usage of higher and lower frequency bands and the massive use of MIMO techniques.

New Radio Access Technologies (e.g. 5G) on the other hand are intended to enable large performance gains, possibly facilitated by millimetric waves and new spectrum made available at World Radio Conferences (WRC-15 and WRC-19).

3. Purpose

3.1. The purpose of the 5G Forum is to:

3.1.1. assist the Independent Communications Authority of South Africa ("the Authority or ICASA") to prepare necessary contributions to be made to meetings of the International Telecommunications Union ("the ITU") in respect of 5G and other relevant standards bodies;

3.1.2. ensure that such contributions are well informed and take into account considerable specific requirements of South Africa; and

3.1.3. act as an advisory body and not an executive committee; therefore it must not perform any management responsibilities and shall have an objective and independent role.

3.2. The scope of work of the Forum includes the following:

3.2.1. Identification of requirements and capabilities of individual use cases in the 5G era;

3.2.2. Collection and analysis of information on potential frequency bands for future 5G;

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- 3.2.3. International cooperation through Memoranda of Understanding with similar international fora focused on 5G;
- 3.2.4. Preparation for participation in the ITU-R 5G workshop provisionally scheduled for first quarter of 2017; and
- 3.2.5. Becoming a platform for recognition and identification of South African innovations that may benefit from standardization.

4. Membership

4.1. Composition

4.1.1. The 5G Forum shall consist of members coming from the following organisations and types of organisation:

- 4.1.1.1. ICASA;
- 4.1.1.2. Universities;
- 4.1.1.3. Research organizations;
- 4.1.1.4. Government departments;
- 4.1.1.5. Equipment manufacturers;
- 4.1.1.6. Electronic communications operators;
- 4.1.1.7. Broadcasters;
- 4.1.1.8. Financial institutions;
- 4.1.1.9. Industry associations;
- 4.1.1.10. Car manufacturers (and car manufacturer associations, e.g. NAAMSA);
- 4.1.1.11. Municipalities (on development of smart cities - e.g. SALGA);
- 4.1.1.12. Property developers (on development of smart homes); and
- 4.1.1.13. The retail industry.

4.1.2. Members appointed in the 5G Forum must not be subject to disqualification in terms of section 6 (1) of the ICASA Act.

4.1.3. The Members must, on account of expertise, qualifications and experience, be suitable to serve in the 5G Forum.

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4.1.4. The 5G Forum membership remains open to other organisations that express interest to become members. Therefore, the Authority may invite or welcome other organisations to become members of the 5G Forum.

4.2. Duration

4.2.1. Members of the 5G Forum shall serve until the Forum is dissolved in terms of clause 10 hereof.

4.2.2. The chairperson shall perform his/her duties until the Forum is dissolved or until the Authority appoints a new chairperson.

5. Appointment of the Chairperson and functions

5.1. The Chairperson of the 5G Forum shall be appointed by the Authority.

5.2. The chairperson must convene meetings of the 5G Forum in terms of section 11 of the ICASA Act and determine the procedures thereof.

6. Termination of membership

6.1 The Authority may terminate membership of any member appointed to the 5G Forum on the following basis:

6.1.1. If the member acts in breach of any of the provisions of these Terms of Reference, the ICASA Act or underlying statutes;

6.1.2. Where a member does not attend three consecutive meetings of the 5G Forum without adequate cause;

6.1.3. Due to death or incapacity; and

6.1.4. Where a member consistently fails to carry out the required duties.

6.1.5. A member may terminate his/her or its services, subject to Authority's approval.

7. Responsibilities

7.1 The roles and responsibilities of the 5G Forum are as follows:

7.1.1. To review these Terms of Reference and make recommendations in respect of amendments, if any, for Council's approval;

7.1.2. To ensure that South African unique requirements for 5G are considered in the development of the ITU requirements;

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- 7.1.3. To identify requirements and capabilities of individual applications expected in the 5G era;
- 7.1.4. To collect and analyse information on potential frequency bands for 5G, including current usage, technical information and radio propagation models;
- 7.1.5. To consider new 5G applications from the user point of view;
- 7.1.6. To facilitate collaboration arrangements with similar international fora focusing on 5G;
- 7.1.7. To prepare contributions for participation in the ITU and other standards bodies' meetings, workshops and seminars dealing with 5G and its future development;
- 7.1.8. To conduct workshops and seminars with the local and regional industry and stakeholders;
- 7.1.9. To be a focal point and platform for recognition and identification of South African innovations that may benefit from standardisation; and
- 7.1.10. To ensure that South Africa keeps pace with the vision of 5G in addressing the demands and business contexts of 2020 and beyond.

8. Meetings

8.1. Agenda, minutes and frequency

- 8.1.1. 5G Forum meetings may be held in person, by telephone, video conference, or other electronic means;
- 8.1.2. 5G Forum meetings shall be held at least quarterly. The 5G Forum shall however, meet as regularly, as required;
- 8.1.3. 5G Forum members are required to be fully prepared for each meeting, having read the documentation in advance, and to make every reasonable effort to attend each meeting;
- 8.1.4. Any member of the 5G Forum, may call for a meeting after consultation with the Chairperson;
- 8.1.5. A detailed agenda and supporting documentation, as well as confirmation of the date and time of the meeting, must be circulated at least seven (7) days prior to the scheduled meetings;
- 8.1.6. The project coordinator of the 5G Forum team from the Authority

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will act as a secretariat and will nominate a person from the Authority to take the minutes;

8.1.7. The minutes of each meeting shall be circulated for review by the Chairperson and members, within seven (7) days of the meeting taking place, for review by all attendees;

8.1.8. The Forum must establish an annual plan for each year to ensure that all relevant matters are covered by the agenda of the meetings scheduled for the year. The annual plan must ensure proper coverage of the matters laid out in these terms of reference. The number, timing and length of meetings and agendas are to be determined in accordance with the annual plan;

8.2. Attendance

8.2.1. The 5G Forum may invite other officials from the Authority as well as any other relevant organisation to attend the Forum meetings.

8.2.2. Where a 5G Forum member is not present with permission of the Chairperson of the Forum, the Chairperson of the Forum may request the organisation concerned to provide an alternative member to advise the Forum in the absence of the said member.

8.2.3. Any official from the Authority and or any person who wishes to observe proceedings in any meeting of the 5G Forum may make a request to the Secretariat of the Forum to do so, who will have the jurisdiction to either allow or decline the request. However such a person must not participate in the proceedings, unless invited to do so by the Secretariat.

8.3. Quorum

8.3.1. The 5G Forum quorum shall be constituted by a majority of the confirmed members at the time.

8.3.2. Where attention is drawn to a loss of quorum, the meeting may be adjourned until such time as the 5G Forum determines.

9. Reporting

9.1. The chairperson shall, on behalf of the 5G Forum, report to the Council on its proceedings after each meeting on all significant matters within its responsibilities as set out in these Terms of Reference.

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9.2. The 5G Forum shall make recommendations to Council concerning any matter it deems appropriate on any area within its remit where action or improvement is required.

10. Authority of the Forum

10.1. The 5G Forum operates independently of formal management structures of the Authority and is free of any organisational impairment, while Council supports and endorses the Forum. The Forum acts in accordance with its responsibilities and the delegated authority of Council as recorded herein.

11. Dissolution of the Forum

11.1. The decision to dissolve or wind up the 5G Forum must be made by Council, upon receipt of a written report and having satisfied itself that the 5G Forum has satisfactorily dispensed with the delegated power, function and duty.

11.2. The existence of the 5G Forum may be reviewed periodically and shall be dissolved within six (6) months at the end of the year 2024 to follow the IMT-2020 roadmap of the ITU.

12. Review and approval

12.1. These terms of reference shall be reviewed and amended periodically, as may be required, subject to approval by Council.