



# Wireless World Research Forum (WWRF)



## WWRF Working Group 5 “Short Range Wireless Communication Systems”

### Charter

Version 1.1

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## 1. Description and Goals

The goals of WWRF Working Group 5 (WG5) are to:

- Study and champion short range wireless communications as a part of the Wireless World, and disseminate related results within the WWRF community and externally, in white papers and “white presentations”;
- Ensure that all aspects of short range wireless communications are considered within WWRF and that, where they fall within the remit of other WWRF groups, the required information flows to and from WG5 exist.

The creation of subgroups with a strong interest in specific short range communication systems or technologies (such as sensor networks, WLAN) is encouraged, so as to seed common contributions and white papers.

WG5 aims to be a neutral forum for academia and industry, where visions, requirements, and results relevant to future or on-going external activities<sup>1</sup> can be discussed, so that they spread across regions and domains, and enable early harmonization. We encourage people from the most relevant activities to come and make presentations within WWRF and/or WG5, to create alliances that promote clear, attractive, and technically sound visions, and possible solutions, for future short range communication systems.

## 2. Scope

WG5 addresses “Air interface aspects of local and personal area networks, body area networks, home networks, vehicle area networks, ad-hoc networks and other short range communications systems”.

“Other short range communications systems” within the scope of WG5 can include sensor networks, free-space optical communication systems, ultra wide band systems and non-communication capabilities related to short range communication technologies (e.g. location computation).

Work in WG5 takes into account both PHY and MAC layer studies (ranging from advanced receiver techniques to power- and QoS-aware protocols), as well as implementation issues (from RF front ends to complexity assessments) and cross-layer optimization.

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<sup>1</sup>Within the context of this charter, “external activities” or “bodies” may include, but are not limited to, those related to individual organizations, industry alliances, lobbying, policy, promotion, regulation, research funding, research projects, and standardization.



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Among the large number of parameters (e.g. range, bit-rate, power, purpose of connection, Doppler shift/spread) which can be used to characterize *short range* wireless communication systems, the definition of the scope of WG5, with respect to other WWRF WGs, focuses on two:

- the purpose of the network; and
- the range of wireless links.

Within WG5, we mainly seek to provide localized “single system” communications, using wireless links that have an operating range of up to a few hundred meters. This is in opposition to country-wide network coverage, that enables access to another mobile device potentially far away from the local sphere of interaction. Work within WG5 hence concentrates on levels 1-3 of the multisphere model (PAN, Immediate Environment, Instant Partners), as presented in the WWRF Book of Visions, while other levels, treating wide area and global network connectivity (including wireless and fixed systems, as well as interfaces between different standards), are mainly in the scope of other Working Groups.

## 3. Criteria for success

With respect to the goals and scope defined above, the success of WWRF Working Groups and Special Interest Groups can be measured by:

- The availability, completeness and quality of position documents

This is related to the number and quality of the white papers and presentations, available to the WWRF community and external bodies. It is critical to create and maintain white papers in all areas having active members. Outputs from any WG/SIG will be placed in the public area of the WWRF website, once they reach a stable state. The success can be measured through the regular creation, maintenance and release of such position documents and by performance to planned schedules for deliverables.

- The dynamic interchange of ideas

This can be measured by assessing the number and quality of contributions to group meetings, the number of participants, the level and consistency of contributions, and the degree of coverage of the WG/SIG research areas. These should be of a level sufficient to sustain the activities of the working group and its value to the forum. Each group should achieve consensus and mutual understanding over white papers/presentations and have a successful and fruitful cooperation with other groups inside and outside WWRF.

- The influence on key stakeholders

This can be measured through the recognition and adoption of WG/SIG ideas and concepts by WWRF members and external bodies such as standardization bodies, research efforts, or products. This also relates to the number and quality of presentations to external bodies.

## 4. Duration

No duration limit is foreseen. As required by the WWRF, group charters will be revised at least annually and seek approval of the steering board. The WWRF can terminate any WG or SIG at



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any time should the need arise.

## 5. Schedule and deliverables, Resource requirements

The following deliverables will be made:

- White Papers and shorter versions of them in presentation format, called “White Presentations” covering topics within the group’s scope.
- Short summaries of contributions and discussions at group meetings. These could also include reports on missing or over-represented areas in the WG/SIG activities. Report on group activities and progress to the plenary at each WWRF meeting.
- Dissemination of white papers and other documents through the WWRF Book of Visions and external media such as scientific journals, conferences and books, as requested and agreed.
- All deliverables will be reviewed and updated as necessary.

The Working Group requires the following resources:

- Adequate space and time in forum meetings to conduct group meetings, including sufficient time for fruitful discussions;
- Support for dedicated mailing list(s), website and document repository;
- WWRF mechanisms supporting liaison and collaboration with other WWRF groups and external bodies.

## 6. Liaison/collaboration with external organizations

Working Groups and Special Interest Groups will pursue the following liaisons and collaborations with external organizations:

- Standardization and regulation bodies, to influence future generation wireless standards (examples are IEEE 802, ETSI, ITU-R, ARIB, IETF/IRTF)
- Professional societies for widespread dissemination of WWRF results (examples are IEEE Societies, IEE, ACM)
- Complementary or similar groups in other fora, to share perspectives and co-ordinate activities toward common visions and research agendas (examples are mITF, UMTS Forum)
- Research funding bodies and large research projects with common interests and research goals (examples are multinational projects such as European FP6 IPs and NoEs, and nationally-funded projects such as FuTURE, DARPA and NSF projects)

WG5 shall specifically liaise and collaborate with the following bodies:

- IEEE802.11 and IEEE802.15, including their respective subgroups
- WINNER, PULSERS, WIGWAM and Chinese FuTURE projects



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Interaction with external organisations will utilise any liaison agreements and processes executed by the WWRF.

## 7. Co-ordination with other WWRF bodies

The WG/SIG chair and/or vice-chair will represent the working group in the forum steering board. Representatives of each WG/SIG will participate as members of the Vision Committee, contributing to the development of the visions and reference models that guide the technical direction of the forum. The Vision Committee will develop specific technical action plans, from which the working group will derive specific deliverables and schedules.

Relationships will be pursued between all WGs and SIGs. Mechanisms ensuring that there is a continuous information flow between them should be put in place:

- Joint sessions and discussions on overlap issues, common studies and complementary activities in order to leverage synergies between the different WWRF Groups.
- Parallel sessions should mainly address diverging topics that are not of common interest.
- Presentation of white papers and relevant contributions in meetings of other WWRF Groups.

Since they treat related topics, very close relationships exist between WG4 and WG5, calling for appropriate scheduling of sessions during WWRF meetings, as reflected by the above stated rules.

## 8. Meetings and communications

- Specific WG and SIG meetings will be held during each WWRF meeting, as well as cross-WG/SIG meetings, where found appropriate.
- Interim meetings may be scheduled as needed either through physical meetings or, more typically, via conference call. Specific task forces or drafting committees can be appointed by the chairman to prepare white papers, specific technical documents or to find solutions to technical problems.
- Communication outside the meetings will be conducted through dedicated mailing lists and exploders to distribute information such as meeting minutes or general announcements of interest to working group members.

[wg5@wireless-world-research.org](mailto:wg5@wireless-world-research.org)

To subscribe, please contact the mailing list administrator:

[mail-lists@wireless-world-research.org](mailto:mail-lists@wireless-world-research.org).

- A web page within the forum's website will be maintained by each Working Group and Special Interest Group, for sharing of information and documents.



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## 9. Membership

Membership to Working Groups and Special Interest Groups follows the same rules as for WWRF:

- All WG and SIG activities are open to all representatives of WWRF member organisations. This includes contribution to and participation in WWRF meetings, as well as access to mailing lists, unfinished documents, and the “members only” section of the WWRF website.
- Representatives of non-member organisations are welcome to contribute to and participate in the WG meetings co-incident with WWRF meetings.
- Voting in Working Groups and Special Interest Groups is limited to attending representatives of member organizations.
- The Working Group and Special Interest Group charters are available to all interested parties.