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S. Dawkins, Ed.
Huawei
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An IRTF Primer for IETF Participants
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Abstract

This document provides a high-level description of things to consider when bringing new research into the Internet Research Task Force (IRTF). It targets Internet Engineering Task Force (IETF) participants, emphasizing the differences in expectations between the two organizations.

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[1.](#) Introduction and Scope

This document provides a high-level description of things to consider when bringing new research into the Internet Research Task Force (IRTF). It targets Internet Engineering Task Force (IETF) participants, emphasizing the differences in expectations between the two organizations.

IRTF research group guidelines and procedures are described in [RFC2014] (BCP 8), and this document does not change those guidelines and procedures in any way.

[2.](#) The IRTF is not the IETF

A number of proposals from experienced IETF participants for new IRTF research groups have encountered problems because the proposals would have been appropriate for the IETF, but not for the IRTF. [RFC2014] describes the origin of IRTF research groups, but doesn't provide much detail about the process, which is intended to be flexible and accommodate new types of research groups. Lacking that detail, experienced IETF participants assume that chartering an IRTF research group will be similar to chartering an IETF working group, and follow the suggestions in [RFC6771] to gather a group of interested parties, and then follow the suggestions in [RFC5434] to prepare for a successful BOF and eventually, a chartered working group.

Both of these documents are excellent references for proposals in the IETF, but their suggestions may result in a proposal that is almost the opposite of what the IRTF Chair is looking for in a proposal for an IRTF research group. The mismatches fall into some consistent categories.

It's worth noting that the IRTF Chair has substantial autonomy on what research groups are chartered and how they reach that stage. This document reflects Lars Eggert as IRTF Chair. If future chairs do things differently, revising this document would be a good plan.

2.1. Research and Engineering

Although this should be obvious, IRTF research groups aren't IETF working groups. Some IRTF research groups conduct research, some act as fora for researchers to discuss ideas, in the manner of academic workshops, and some provide a home for topics that are important to the development of the Internet but not in scope for the IETF, with researchers being involved at some level.

If a likely solution is apparent, and what's required is working out details, that's what IETF working groups do.

"If it has to work when you're finished, it wasn't research, it was engineering" - attributed to Dave Clark.

2.2. Research Community Alternatives

IRTF research groups are only one of several alternatives available to researchers. Where there are already well-established relevant workshops and conferences, researchers might be less motivated to also participate in an IRTF research group.

Starting an IRTF research group may still be the right thing to do, but will be more likely to succeed in attracting a stable community of researchers if it offers a venue that complements what's already available. This isn't a requirement, but it is an opportunity for creative thinking.

"Complementing" may take many different forms, reflecting the flexibility IRTF research groups have in organizing their work. For instance, some IRTF research groups focus on applying theories that have been developed elsewhere to the Internet, while others focus on bringing researchers and engineers together, and in particular to "build bridges" between the practitioners and the theorists.

2.3. Scope

IRTF research groups have a scope large enough to interest researchers, attract them to the IRTF, and keep them busy doing significant work. Their charters are therefore usually much broader than IETF working group charters, and research groups often discuss different topics underneath the charter umbrella at different times, based on current research interests in the field.

IETF working groups are chartered with a limited scope and specific deliverables. If deliverables and milestones are known, the proposal is likely too limited for the IRTF.

2.4. Timeframes

IRTF research groups bring researchers together to work on significant problems. That takes time. The effort required by a research group is likely to take at least three to five years, significantly longer than IETF working groups envision when they are chartered.

2.5. Alternatives

IRTF research groups are encouraged to explore more than one alternative approach to the chartered problem area. There is no expectation that the research group will "come to consensus" on one approach. The research group may publish multiple competing proposals as research produces results.

Because IETF working groups focus on immediate needs, the emphasis is often on picking one approach, whether that means starting with an approach the working group participants agree on, or considering alternatives with a view to picking one before spending significant effort on alternatives that won't go forward.

The IRTF as an organization may also charter multiple research groups with somewhat overlapping areas of interest, which the IETF tries very hard to avoid.

2.6. Process

All IRTF participants have the obligation to disclose IPR and otherwise follow the IRTF's IPR policies, which closely mirror the IETF's IPR policies, but in all other aspects, IRTF research group operation is much less constrained than is IETF working group operation.

Each IRTF research group is permitted (and encouraged) to agree on a way of working together that best supports the specific needs of the group. This freedom allows IRTF research groups to bypass fundamental IETF ways of working, such as the need to reach at least rough consensus, which IRTF research groups need not do. The mode of operation of IRTF research groups can therefore also change over time, for example, becoming more like IETF working group operation as the research the group has been progressing matures and nears potential standardization in the IETF.

2.7. Charters

The purpose of charters in the IRTF is to broadly sketch the field of research that a group is interested in pursuing, and to serve as an advertisement to other researchers who may be wondering if the group is the right place to participate.

IETF working group charters tend to be very narrow, intended to constrain the work that the working group will be doing, and may contain considerable text about what the working group will not be working on.

2.8. Deliverables

IRTF research group deliverables may be published as RFCs, but may also be papers that may present intermediate results and be published in academic journals. There is no expectation that IRTF groups publish any RFCs (although many occasionally do). IRTF groups are successful when they stimulate discussion, produce relevant outputs and impact the research community.

IETF working group deliverables tend to be specific protocol, deployment and operational specifications, along with problem statements, use cases, requirements and architectures that inform those specifications.

2.9. Completion

When IRTF research groups have produced the appropriate outputs, researchers may consider what they've learned from producing those outputs, and look for better solutions.

IETF working groups will typically conclude, allowing participants to focus on implementation and deployment, although the working group mailing list may remain open for a time.

3. Now That You Know What Not To DO

The current IRTF Chair, Lars Eggert, is fond of saying, "just act like an IRTF research group for a year, and we'll see if you are one".

There are many ways to "act like an IRTF research group". [[RFC4440](#)] contains a number of points to consider when proposing a new research group. Beyond that - just e-mail the IRTF Chair and start the conversation.

4. Security Considerations

This document provides guidance about the IRTF chartering process to IETF participants and has no direct Internet security implications.

5. IANA Considerations

This document makes no requests of IANA and the RFC Editor can safely remove this section during publication.

6. Acknowledgements

Thanks go to Lars Eggert, who became IRTF Chair in 2011 and has been carrying this information around in his head ever since. Lars also provided helpful comments on early versions of this document.

Thanks also to Scott Brim, David Meyer and Stephen Farrell for helpful review comments.

7. References

7.1. Normative References

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Author's Address

Spencer Dawkins (editor)
Huawei Technologies

Email: spencerdawkins.ietf@gmail.com