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A Mission Statement for the IETF

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Abstract

This memo gives a mission statement for the IETF, tries to define the terms used in the statement sufficiently to make the mission statement understandable and useful, argues why the IETF needs a mission statement, and tries to capture some of the debate that led to this point.

1. Mission Statement

The goal of the IETF is to make the Internet work better.

The mission of the IETF is to produce high quality, relevant technical and engineering documents that influence the way people design, use, and manage the Internet in such a way as to make the Internet work better. These documents include protocol standards, best current practices, and informational documents of various kinds.

The IETF will pursue this mission in adherence to the following cardinal principles:

Open process - any interested person can participate in the work, know what is being decided, and make his or her voice heard on the issue. Part of this principle is our commitment to making our documents, our WG mailing lists, our attendance lists, and our meeting minutes publicly available on the Internet.

Technical competence - the issues on which the IETF produces its documents are issues where the IETF has the competence needed to speak to them, and that the IETF is willing to listen to

technically competent input from any source. Technical competence also means that we expect IETF output to be designed to sound network engineering principles - this is also often referred to as "engineering quality".

Volunteer Core - our participants and our leadership are people who come to the IETF because they want to do work that furthers the IETF's mission of "making the Internet work better".

Rough consensus and running code - We make standards based on the combined engineering judgement of our participants and our real-world experience in implementing and deploying our specifications.

Protocol ownership - when the IETF takes ownership of a protocol or function, it accepts the responsibility for all aspects of the protocol, even though some aspects may rarely or never be seen on the Internet. Conversely, when the IETF is not responsible for a protocol or function, it does not attempt to exert control over it, even though it may at times touch or affect the Internet.

2. Definition of Terms

Mission: What an organization sets out to do. This is in contrast to its goal (which is what it hopes to achieve by fulfilling its mission), and to its activities (which is what specific actions it takes to achieve its mission).

The Internet: A large, heterogeneous collection of interconnected systems that can be used for communication of many different types between any interested parties connected to it. The term includes both the "core Internet" (ISP networks) and "edge Internet" (corporate and private networks, often connected via firewalls, NAT boxes, application layer gateways and similar devices). The Internet is a truly global network, reaching into just about every country in the world.
The IETF community wants the Internet to succeed because we believe that the existence of the Internet, and its influence on economics, communication, and education, will help us to build a better human society.

Standard: As used here, the term describes a specification of a protocol, system behaviour or procedure that has a unique identifier, and where the IETF has agreed that "if you want to do this thing, this is the description of how to do it". It does not imply any attempt by the IETF to mandate its use, or any attempt to police its usage - only that "if you say that you are doing this according to this standard, do it this way". The benefit of

a standard to the Internet is in interoperability - that multiple products implementing a standard are able to work together in order to deliver valuable functions to the Internet's users.

Participants: Individuals who participate in the process are the fundamental unit of the IETF organization and the IETF's work. The IETF has found that the process works best when focused around people, rather than around organizations, companies, governments or interest groups. That is not to say that these other entities are uninteresting - but they are not what constitutes the IETF.

Quality: In this context, the ability to express ideas with enough clarity that they can be understood in the same way by all people building systems to conform to them, and the ability (and willingness) to describe the properties of the system well enough to understand important consequences of its design, and to ensure that those consequences are beneficial to the Internet as a whole. It also means that the specifications are designed with adherence to sound network engineering principles, so that use for its intended purpose is likely to be effective and not harmful to the Internet as a whole.

Relevant: In this context, useful to some group of people who have to make decisions that affect the Internet, including, but not limited to, hardware and software implementors, network builders, network operators, and users of the Internet. Note that it does not mean "correct" or "positive" - a report of an experiment that failed, or a specification that clearly says why you should not use it in a given situation, can be highly relevant - for deciding what NOT to do. A part of being relevant is being timely - very often, documents delivered a year after core decisions have been taken are far less useful than documents that are available to the decision-makers at decision time.

3. The Need for a Mission Statement

The IETF has to make decisions. And in some cases, people acting on behalf of the IETF have to make decisions without consulting the entire IETF first.

There are many reasons for this, including the near-impossibility of getting an informed consensus opinion on a complex subject out of a community of several thousand people in a short time.

Having a defined mission is one of the steps we can take in order to evaluate alternatives: Does this help or hinder the mission, or is it orthogonal to it? If there are limited resources, are there things that they could be invested in that help the mission better?

(Another step is to choose leaders that we trust to exercise their good judgement and do the right thing. But we're already trying to do that.)

4. Issues with Scoping the IETF's Mission

4.1. The Scope of the Internet

A very difficult issue in discussing the IETF's mission has been the scope of the term "for the Internet". The Internet is used for many things, many of which the IETF community has neither interest nor competence in making standards for.

The Internet isn't value-neutral, and neither is the IETF. We want the Internet to be useful for communities that share our commitment to openness and fairness. We embrace technical concepts such as decentralized control, edge-user empowerment and sharing of resources, because those concepts resonate with the core values of the IETF community. These concepts have little to do with the technology that's possible, and much to do with the technology that we choose to create.

At the same time, it is clear that many of the IETF-defined technologies are useful not only for the Internet, but also for networks that have no direct relation to the Internet itself.

In attempting to resolve the question of the IETF's scope, perhaps the fairest balance is struck by this formulation: "protocols and practices for which secure and scalable implementations are expected to have wide deployment and interoperation on the Internet, or to form part of the infrastructure of the Internet."

In addition to this constraint, we are also constrained by the principle of competence: Where we do not have, and cannot gather, the competence needed to make technically sound standards, we should not attempt to take the leadership.

4.2. The Balance Between Research, Invention and Adoption

The IETF has traditionally been a community for experimentation with things that are not fully understood, standardization of protocols for which some understanding has been reached, and publication of (and refinement of) protocols originally specified outside the IETF process.

All of these activities have in common that they produce documents - but the documents should be judged by very different criteria when the time to publish comes around, and it's not uncommon to see people confused about what documents are in which category.

In deciding whether or not these activities should be done within the IETF, one should not chiefly look at the type of activity, but the potential benefit to the Internet - an experiment that yields information about the fact that an approach is not viable might be of greater benefit to the Internet than publishing a standard that is technically competent, but only useful in a few special cases.

For research of an essentially unbounded nature, with unknown probability of success, it may be more relevant to charter a research group than a standards group. For activities with a bounded scope - such as specifying several alternative protocols to the point where experiments can identify the better one for standardization - the IETF's working group mechanism may be an appropriate tool.

4.3. The Balance Between Mission and Procedures

The mission is intended to state what the IETF is trying to achieve. There are many methods that can be chosen to achieve these outcomes - for instance, the appeals procedure is defined so that we can detect cases where our fundamental principles of technical competence and open process has been violated; it is not itself a fundamental value.

Similarly, the question of what body in the IETF declares that a document is ready for publication is entirely outside the mission statement; we can imagine changing that without in any way impacting what the IETF mission is - even though it may significantly impact the ability to achieve that mission.

4.4. The Reach of the Internet

The Internet is a global phenomenon. The people interested in its evolution are from every culture under the sun and from all walks of life. The IETF puts its emphasis on technical competence, rough consensus and individual participation, and needs to be open to competent input from any source. The IETF uses the English language for its work is because of its utility for working in a global context.

4.5. Protocol Ownership

A problem akin to the problem of deciding on the area of the IETF's competence arises when a protocol that is clearly in the IETF's scope is used both on and off the Internet - the premier example is of course the Internet Protocol itself.

Sometimes the IETF defines standards that ultimately see the most use outside the global Internet. The IETF, having defined the standard, will continue to provide the necessary administration of that protocol.

Sometimes the IETF leverages standards that are defined and maintained by other organizations; we continue to work with those organizations on their standards and do not attempt to take them over.

5. Security Considerations

Considering security is one of the core principles of sound network engineering for the Internet. Apart from that, it's not relevant to this memo.

6. Acknowledgements

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