

**The Internet is for End Users**  
**draft-nottingham-for-the-users-01**

Abstract

Internet standards serve and are used by a variety of communities. This document contains guidelines for explicitly identifying them, serving them, and determining how to resolve conflicts between their interests, when necessary.

It also mandates end users as the highest priority concern for Internet standards.

Note to Readers

The issues list for this draft can be found at  
<https://github.com/mnot/I-D/labels/for-the-users> .

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## Table of Contents

<a href="#">1.</a>	<a href="#">Introduction</a>	<a href="#">2</a>
<a href="#">1.1.</a>	<a href="#">Notational Conventions</a>	<a href="#">4</a>
<a href="#">2.</a>	<a href="#">The Internet is for End Users</a>	<a href="#">4</a>
<a href="#">3.</a>	<a href="#">Identifying Relevant Parties</a>	<a href="#">5</a>
<a href="#">3.1.</a>	<a href="#">Handling Change in Relevant Parties</a>	<a href="#">6</a>
<a href="#">3.2.</a>	<a href="#">Avoiding Unnecessary Parties</a>	<a href="#">6</a>
<a href="#">4.</a>	<a href="#">IANA Considerations</a>	<a href="#">7</a>
<a href="#">5.</a>	<a href="#">Security Considerations</a>	<a href="#">7</a>
<a href="#">6.</a>	<a href="#">References</a>	<a href="#">7</a>
<a href="#">6.1.</a>	<a href="#">Normative References</a>	<a href="#">7</a>
<a href="#">6.2.</a>	<a href="#">Informative References</a>	<a href="#">7</a>
<a href="#">Appendix A.</a>	<a href="#">Acknowledgements</a>	<a href="#">8</a>
	<a href="#">Author's Address</a>	<a href="#">8</a>

## [1.](#) Introduction

As the Internet has become prevalent in many societies, it has also unavoidably become a profoundly political thing; it has helped overthrow governments, revolutionize social orders, control populations and reveal people's secrets. It has created wealth for some individuals and companies, while destroying others'.

The IETF, while focused on technical matters, is not neutral about the purpose of its work [[RFC3935](#)]:

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.

However, the IETF is most comfortable making purely technical decisions; our process is defined to favor technical merit, through our well-known bias towards "rough consensus and running code".

Nevertheless, the running code that results from our process (when things work well) inevitably has an impact beyond technical considerations, because the underlying decisions afford some uses,

Nottingham

Expires April 10, 2016

[Page 2]

while discouraging others. Or, in the words of Lawrence Lessig [[CODELAW](#)]:

Ours is the age of cyberspace. It, too, has a regulator... This regulator is code -- the software and hardware that make cyberspace as it is. This code, or architecture, sets the terms on which life in cyberspace is experienced. It determines how easy it is to protect privacy, or how easy it is to censor speech. It determines whether access to information is general or whether information is zoned. It affects who sees what, or what is monitored. In a host of ways that one cannot begin to see unless one begins to understand the nature of this code, the code of cyberspace regulates.

All of this raises the question: Who do we go through the pain of rough consensus and write the running code for?

There are a variety of identifiable parties in the larger Internet community that standards can provide benefit to, such as (but not limited to) end users, network operators, schools, equipment vendors, specification authors, specification implementers, content owners, governments, non-governmental organisations, social movements, employers, and parents.

Good specifications will provide benefit to all of the relevant parties, because standards do not represent a zero-sum game. However, on occasion we do need to balance the benefits of a decision between two (or more) parties.

Likewise, sometimes efforts are brought to the IETF that represent the technical needs of some parties, but does not take the needs of others into account. On its own, such a specification meets a technical need for a subset of the Internet community, but at the expense of other parts. When presented with such a proposal, we need to decide how to handle it.

Currently, such decisions occur in an ad hoc fashion, often without explicitly being discussed. This approach works reasonably well in many cases; even if a party is not directly represented in the process, there are often advocates for their interests, and ultimately protocols that disadvantage a particular party tend to be either rejected by it or eventually replaced.

However, we do sometimes expend a considerable amount of energy mitigating potential harm to under-represented members of the Internet community, and often such harm is not so onerous or obvious as to dissuade them from using something (e.g., [[RFC6265](#)]).

Nottingham

Expires April 10, 2016

[Page 3]

In other words - because our decisions have ethical implications, we will consider their impact and determine whether it is within our core values, and do so in a well-defined open fashion.

To facilitate that, this document outlines a set of guidelines for identifying the relevant parties to an Internet standard, along with their relative priorities. It also gives end user the highest priority in such considerations.

### **1.1. Notational Conventions**

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [[RFC2119](#)].

## **2. The Internet is for End Users**

Internet standards MUST give the highest priority to end users.

While networks need to be managed, employers and equipment vendors need to meet business goals, etc., our mission is to "build a better human society" [[RFC3935](#)] and - on the Internet - society is composed of what we call "end users."

Furthermore, the success of the Internet to date is arguably due largely to its bias towards end user concerns; without a firm preference for their benefit, trust in the Internet will erode, and its value - for everyone - will be greatly diminished.

This does not mean that end users have ultimate priority; there may be cases where genuine technical need of another party requires that end user requirements compromise. However, such tradeoffs need to be carefully examined, and avoided when there are alternate means of achieving the desired goals. If they cannot be, these choices and reasoning SHOULD be carefully documented.

For example, IPv6 [[RFC2460](#)] identifies each client with a unique address - even though this provides a way to track end user activity and helps identify them - because it is technically necessary to provide networking (and despite this, there are mechanisms like [[RFC4941](#)] to mitigate this effect, for those users who desire it).

This also does not mean that the IETF community has any specific insight into what is "good for end users"; as before, we will need to interact with the greater Internet community and apply our process to help us make decisions, deploy our protocols, and ultimately determine their success or failure.

Nottingham

Expires April 10, 2016

[Page 4]

### **3. Identifying Relevant Parties**

The relevant parties to an Internet standard **MUST** be documented, along with their interrelationships.

For example, HTML does so using the "priority of constituencies" in the HTML Design Principles [[PRIORITY](#)]:

In case of conflict, consider users over authors over implementors over specifiers over theoretical purity. In other words costs or difficulties to the user should be given more weight than costs to authors; which in turn should be given more weight than costs to implementors; which should be given more weight than costs to authors of the spec itself, which should be given more weight than those proposing changes for theoretical reasons alone. Of course, it is preferred to make things better for multiple parties at once.

Note how the relative priority is explicit; this is intentional and encouraged. However, it need not be a strict ranking in all cases; in some areas, it can be more useful to give equal weight to parties, so as to encourage the tussle [[TUSSLE](#)].

Likewise, the responsibilities of, or expectations upon, different parties to a standard can vary greatly. For example, end users of Web browsers cannot be reasonably expected to make informed decisions about security, and therefore design decisions there are biased towards default security. When applicable, the expectations upon a party **SHOULD** be documented.

Extensions to existing standards **MUST** document how they interact with the extended standard's relevant parties. If this is not yet documented, the extension **MAY** estimate its impact, in coordination with that standard's community and the IESG.

The burden of this documentation need not be high; if HTML can do it in a paragraph, so can most other standards. While it might be appropriate in a separate document (e.g., a requirements or use cases draft) or the specification itself, documenting relevant parties in the WG charter has considerable benefits, since it clarifies their relationships up-front.

Inevitably, documenting and interpreting these roles will become controversial; this is to be expected, and is still preferable to avoiding the discussion. The point is to make it explicit, so that the affected parties can be made aware of the discussion, and judge the outcome.





### **3.1. Handling Change in Relevant Parties**

Changes in the use, deployment patterns, legal context, or other factors of a standard can bring pressure to re-balance the priorities of existing parties, or insert new ones (usually, when a standard is either extended or evolved).

Such changes **MUST NOT** diminish the priority of existing relevant parties without informed consent. Note that this may preclude the change completely, as it is often impossible to gain the informed consent of a large or diffuse group (e.g., end users).

For example, there has been increasing pressure to change HTTP [[RFC7230](#)] to make it more amenable to optimization, filtering, and interposition of other value-added services, especially in the face of wider use of encryption (through HTTPS URIs). However, since HTTPS is already defined as a two-party protocol with end-to-end encryption, inserting a third party in any fashion would violate the expectations of two existing parties; end users and content publishers. Therefore, the HTTP Working Group has refused to consider such changes.

### **3.2. Avoiding Unnecessary Parties**

In protocol design, intermediation is often thought of as "those parties on the direct path between two people attempting to communicate"; e.g., middleboxes, proxies and so on.

When discussing the parties relevant to an Internet standard, this definition can be expanded to include those parties that have the ability to prevent or control communication between two parties. This naturally includes middleboxes, but can also include third parties not directly on-path.

For example, HTTP has on-path intermediaries (proxies, gateways, etc.), but also off-path intermediaries, in the form of the DNS registrar, the DNS server, and also the Certificate Authority if TLS is in use. Certificate Transparency [[RFC6962](#)] potentially adds yet another intermediary to this protocol suite.

While there might be a good technical reason to interpose such an intermediary, it also introduces a new party, and thus needs to be done with due consideration of the impact on other parties.

Therefore, unnecessary parties **SHOULD** be avoided when possible in Internet standards.

Nottingham

Expires April 10, 2016

[Page 6]

#### **4. IANA Considerations**

This document does not require action by IANA.

#### **5. Security Considerations**

This document does not have direct security impact; however, applying its guidelines (or failing to) might affect security positively or negatively.

#### **6. References**

##### **6.1. Normative References**

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## **Appendix A. Acknowledgements**

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