

UNIVERSITY OF
Southampton

The Web Standards Process

COMP3220 Web Infrastructure

Dr Nicholas Gibbins – nmg@ecs.soton.ac.uk

How are web standards made?







Who makes web standards?



What counts as a Web standards organisation?



IETF Structure and Process

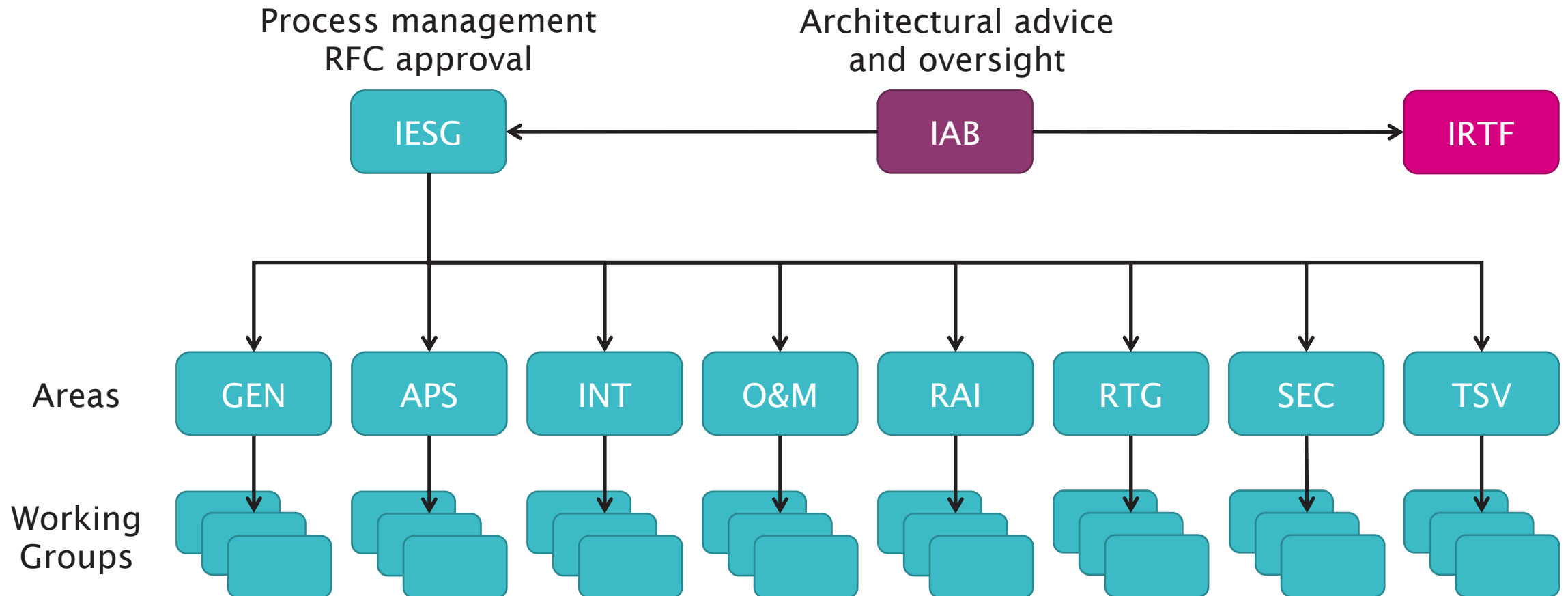
The Internet Engineering Task Force

We reject: kings, presidents and voting.
We believe in: rough consensus and running code.

David Clark

Be conservative in what you send and liberal in what you accept.
Jon Postel

IETF Structure



IETF Document Types

Requests for Comments (RFC)

- Started as informal notes
- Some are Internet standards documents (STD)
- Some give policies or procedures (Best Current Practice – BCP)
- Some are informational
- Others are more whimsical (April Fool's RFCs)

Network Working Group
Request for Comments: 1149

D. Waitzman
BBN STC
1 April 1990

A Standard for the Transmission of IP Datagrams on Avian Carriers

Status of this Memo

This memo describes an experimental method for the encapsulation of IP datagrams in avian carriers. This specification is primarily useful in Metropolitan Area Networks. This is an experimental, not recommended standard. Distribution of this memo is unlimited.

Overview and Rational

Avian carriers can provide high delay, low throughput, and low altitude service. The connection topology is limited to a single point-to-point path for each carrier, used with standard carriers, but many carriers can be used without significant interference with each other, outside of early spring. This is because of the 3D ether space available to the carriers, in contrast to the 1D ether used by IEEE802.3. The carriers have an intrinsic collision avoidance system, which increases availability. Unlike some network technologies, such as packet radio, communication is not limited to line-of-sight distance. Connection oriented service is available in

IETF Document Types

Requests for Comments (RFC)

- Started as informal notes
- Some are Internet standards documents (STD)
- Some give policies or procedures (Best Current Practice – BCP)
- Some are informational
- Others are more whimsical (April Fool’s RFCs)

Internet Drafts

- Preliminary technical specifications
- Only valid for six months, unless updated
- Removed from official repository on expiry

W3C Structure and Process

The World Wide Web Consortium

A membership organisation - must join in order to participate*

Key players:

- Director (TimBL)
- Team: Permanent staff, support workings of W3C
- Advisory Committee (AC): Contains a representative from each member organisation. Reviews proposals from Director
- Advisory Board (AB): Guides W3C in non-technical matters
- Technical Architecture Group (TAG): Coordinates cross-technology architecture developments

* with some exceptions

W3C Structure

Working Group

- Chartered for a specific duration to deliver a particular standard

Interest Group

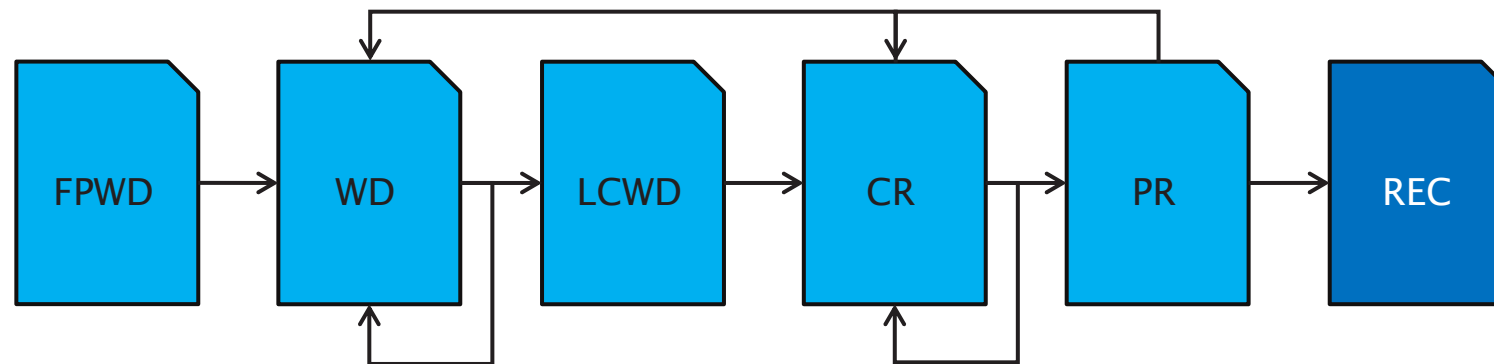
- Chartered discussion forum

Community Group

- Discussion forum open to non-members

W3C Technical Report types

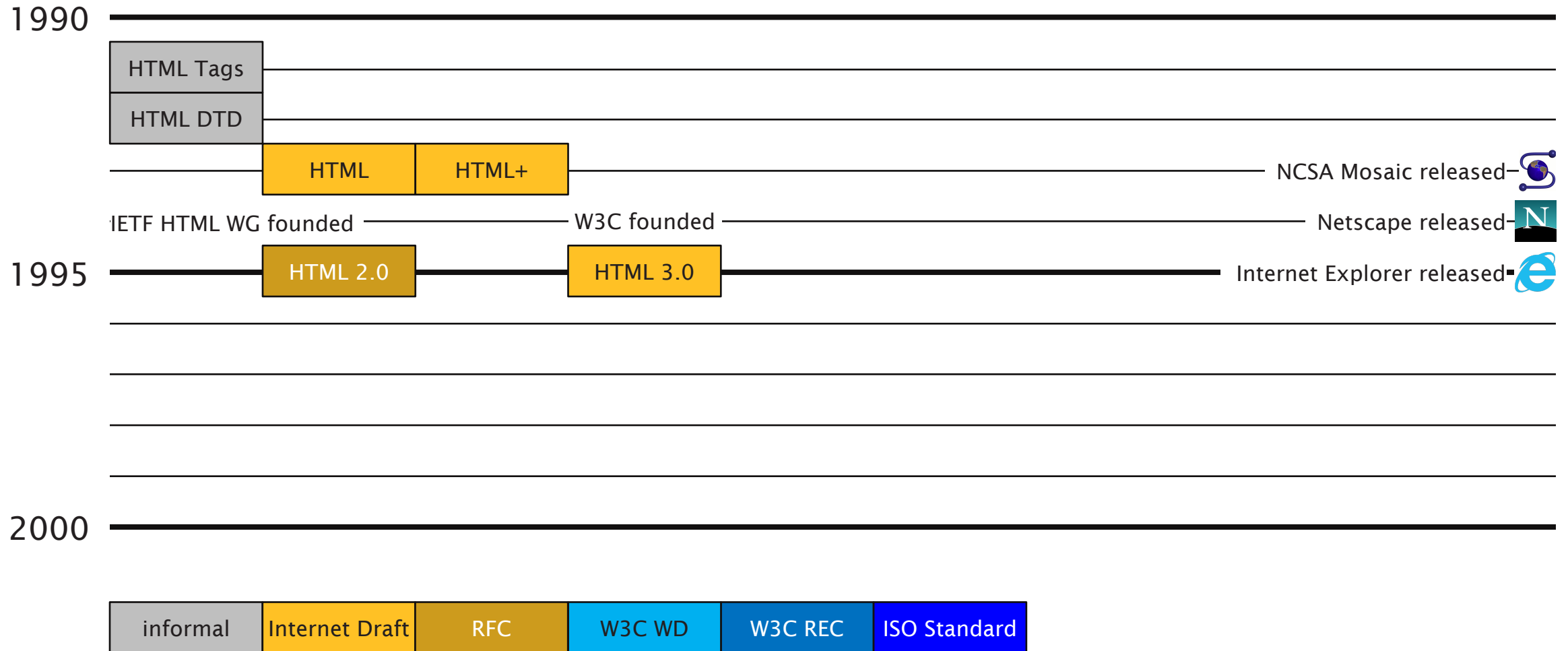
- Recommendation
- Proposed Recommendation
- Candidate Recommendation
- Working Drafts
 - First Public Working Draft, Last Call Working Draft
- Notes
 - Member Note, Working Group Note



Case Study: HTML



The Evolution of HTML: 1991-1995



Trouble in the Working Group

IETF HTML WG formed in September 1994

By 1995, the IETF HTML WG had grown unwieldy

- Over 100 members in the group
- “I came back after just three days away to find over 2000 messages waiting”

Disbanded in December 1995

W3C HTML Editorial Review Board formed in February 1996

- Became W3C HTML WG in December 1996

Embrace and Extend

“To a certain extent, Microsoft built its business on the Web by extending HTML features.”

Dave Raggett

By the mid-90s, Netscape and Microsoft were creating their own proprietary extensions to HTML

- ``
- `<marquee>`
- `<blink>`

“This page is best viewed in browser X”



De Jure versus De Facto Standards

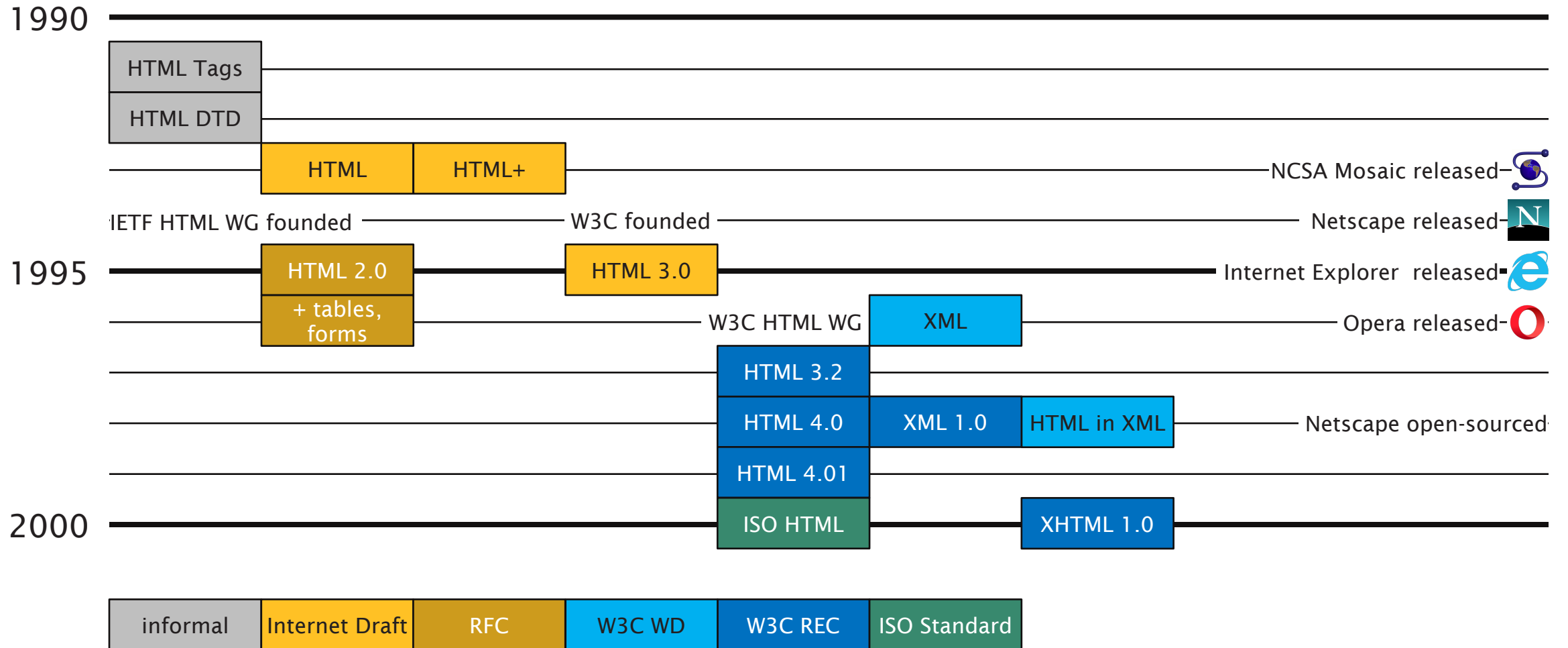
De Jure: “according to law”

- De jure standards created to *extend* existing practice
- HTML 3.0, HTML 4.0, XHTML 1.0

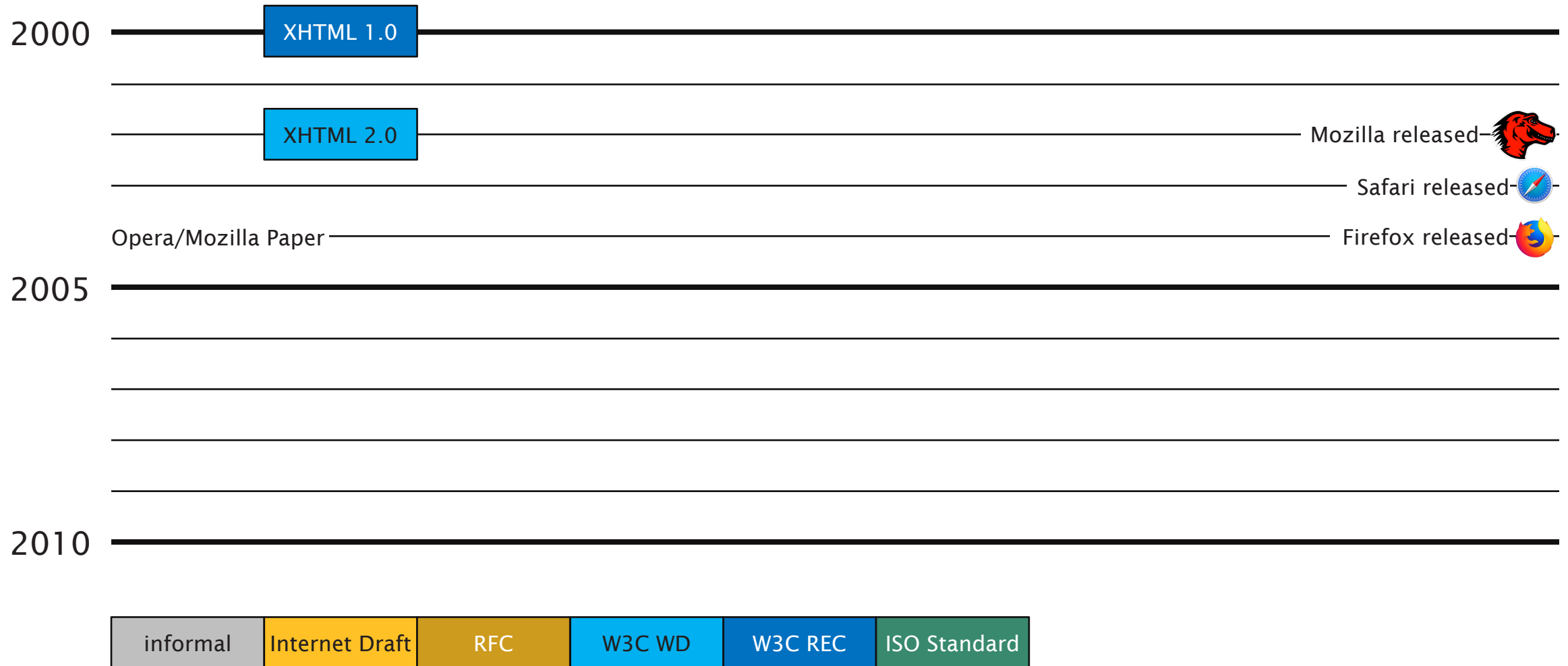
De Facto: “as a matter of fact”

- De facto standards created to *codify* existing practice
- HTML 2.0, HTML 3.2

The Evolution of HTML: 1995-2000



The Evolution of HTML: 2000-2005



Opera/Mozilla Paper

Position Paper for the W3C Workshop on Web Applications and Compound Documents

Critical of official W3C direction for HTML (i.e. XHTML)

Seven principles:

- Backwards compatibility and clear migration path
- Well-defined error handling
- Users should not be subject to authoring errors
- Practical use
- Scripting is here to stay
- Device-specific profiling should be avoided
- Open process

Web Hypertext Application Technology WG

Formed in 2004 in response to perceived slow HTML standards development in W3C

Founder members: Apple, Mozilla and Opera

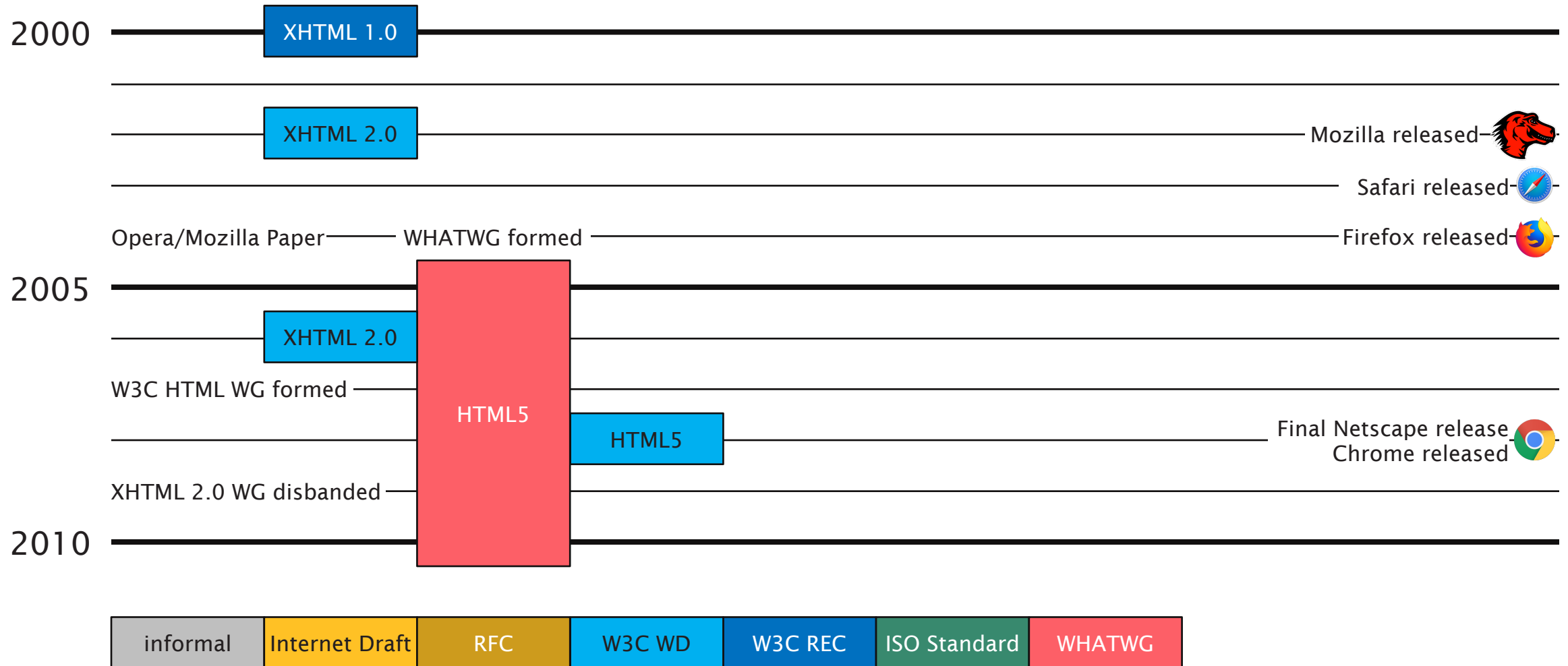
- Now includes Google (with move of HTML5 editor Ian Hickson from Opera) and Microsoft

Treats HTML 5 as a “living standard”, maintained by an “informed editor”

Membership types:

- Invitation-only Members
- Open Contributors

The Evolution of HTML: 2005-2010



HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION:
THERE ARE
14 COMPETING
STANDARDS.

14?! RIDICULOUS!
WE NEED TO DEVELOP
ONE UNIVERSAL STANDARD
THAT COVERS EVERYONE'S
USE CASES.

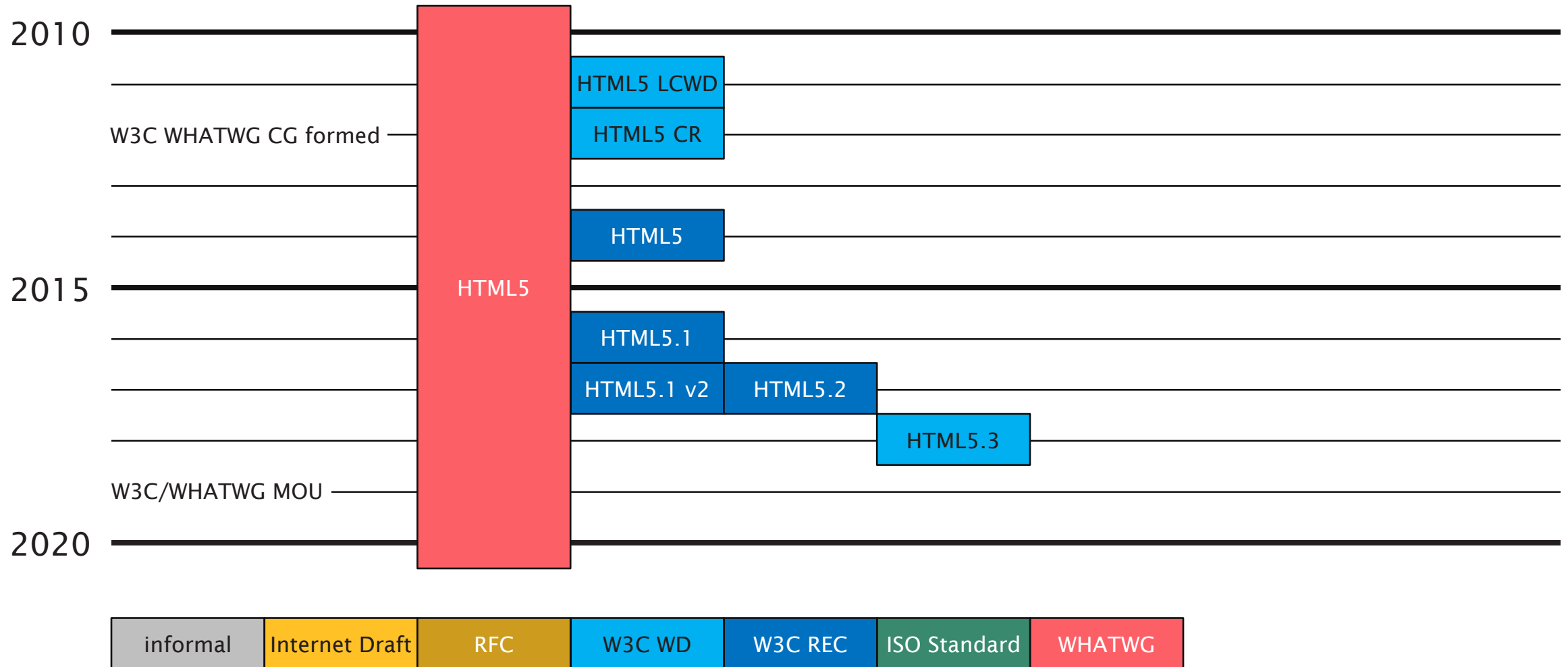


YEAH!

SOON:

SITUATION:
THERE ARE
15 COMPETING
STANDARDS.

The Evolution of HTML: 2010-



W3C/WHATWG Memorandum of Understanding

Attempt to settle the dispute between W3C and WHATWG over control/ownership of the HTML and DOM standard

WHATWG became responsible for principal development of HTML/DOM

W3C gives input to WHATWG via HTML WG

W3C endorses WHATWG review drafts as W3C Recommendations
(still the practice in 2021?)

Further Reading

Internet Engineering Task Force (IETF)

<http://www.ietf.org/>

The Tao of IETF

<http://www.ietf.org/tao.html>

World Wide Web Consortium (W3C)

<http://www.w3.org/>

W3C Consortium Process Document

<https://www.w3.org/Consortium/Process/>

Memorandum of Understanding Between W3C and WHATWG

<https://www.w3.org/2019/04/WHATWG-W3C-MOU.html>

A History of HTML (1998). From *Raggett on HTML 4*

<http://www.w3.org/People/Raggett/book4/ch02.html>

Next Lecture: Caching and Proxies