ANSA

ANSA Phase III

Web or Spaghetti: who is holding back the chaos?

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Abstract

This is a presentation for ANSAworks '96.

There is a great deal of interest in the World Wide Web, and many things going on, but is the original coherence and compatibility being lost in the process? Will the web be a usable resource, or will it degenerate into chaos?

This presentation is a survey of activities intended to preserve and enhance the coherence and compatibility of the web, in the presence of the explosive growth both of content and technology.

The focus is on standards that are being developed, and in particular on the efforts of the World Wide Web Consortium to promote interoperability.

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Web or Spaghetti

Who is holding back the chaos?

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What Chaos?

No problem: Just use HTTP to deliver HTML?

- **Who defines HTTP**
  - **New features wanted**
  - **More efficient version wanted**

- **Who defines HTML**
  - **New features**
  - **Inserted objects**
  - **Active content**

- **Clients (browsers) servers, and content must be compatible.**

- **Other issues as well.**

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Single supplier compatibility?

- **Doesn't everyone use Netscape Navigator?**
  - **About 80%**

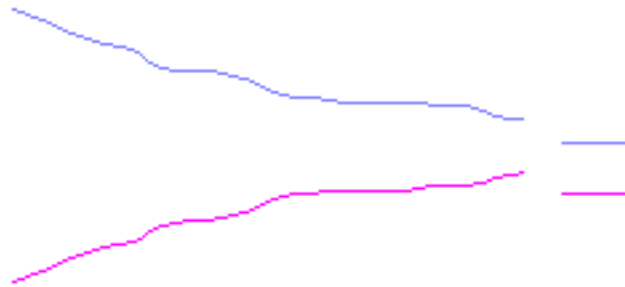- **Note NCSA-Netscape switch in 4 months**

- **Microsoft starting to emerge**
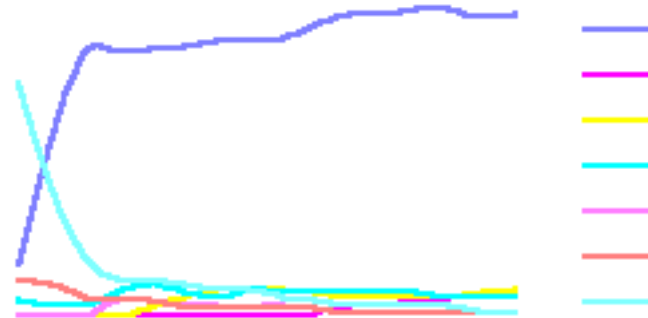
Trends graph from Intersé Corporation

- **Some browsers lie to defeat browser specific content**

80% is good enough — or is it?

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Single product compatibility?

- **80% use Netscape Navigator**
    - **but not the same version.**

Trends graph from Intersé Corporation

- **You can't depend on "same software" for compatibility**

standards are needed

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Who is working on standards?

- **IETF: Internet Engineering Task Force**
  - **Working Groups develop Internet Standards**
  - **Open to any who volunteer**
  - **Secretariat but no design/engineering staff**

- **W3C: The World Wide Web Consortium**
  - **Industry consortium**
  - **Open to any organisation that pays the fees**
  - **Design/engineering staff at MIT and INRIA**

- **ISO/IEC**
  - **Proposed International standard for HTML**
  - **Proposed to JTC1/SC29/WG12**

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IETF Working Groups

Focus on three working groups:

- **HTML: HyperText Markup Language**
  - 2 RFCs, 5 Internet-Drafts

- **HTTP: HyperText Transfer Protocol**
  - No RFCs, 12 Internet-Drafts

- **WTS: Web Transaction Security**
  - No RFCs, 4 Internet-Drafts

- **W3C active participants in all these groups.**

IETF process is slow.

- **Many content authors ignore standards**

- **Software supplier attitude varies:**
  - Microsoft DTD for MSIE – Netscape have never published a DTD

W3C Activity Areas

- **HTML Evolution**

- **HTTP Enhancements**

- **Printing from the web**

- **WWW and OO: the web of objects, mobile code**

- **Security and Payments**

- **Platform for Internet Content Selection (PICS)**

- **Demographics**

- **Internationalization**

- **Other issues less active**

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W3C HTML Activities

- **HTML language development**
    - **Embedding Objects into HTML Documents**
    - **Style sheet definition**
    - **HTML level 3**
    - **Resource Variants**
    - **Toolbars, Frames and Subsidiary Windows**
    - **Fill-out Forms — additional features**
    - **Scripting**
    - **Math**

- **Testing and Certification**

- **Arena browser**
    - **Testbed for style sheets**

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HTTP Activities

- **Digest Access Authentication**

- **Byte range retrieval**

- **Persistent Connections**

- **State information**

- **PEP: Protocol Extension Protocol**

- **Caching**

- **Session Identification**

- **Notification for proxies**

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Printing from the Web

- **Workshop held to be held April 25**

- **Technical issues to enable improved printing quality**

- **Proposed topics:**
  - **Content Negotiation — what additional features needed for printing**
  - **Style sheets — what additional features are needed for printing**
  - **Fonts — naming/matching, formats, subsetting and licensing**
  - **Printing collections of Web pages**
  - **New media types — e.g. resolution independent drawing formats**

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Distributed Obects and Mobile Code

- **Increasing automation on the web**
    - **Executable content**
    - **Code from interface specs**

- **Joint W3C/OMG Workshop June 24-25**
    - **"This workshop will identify a range of software architectures for combining and scaling web technology and object technology."**

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Security

- **W3C Security Group (members only)**

- **IETF WTS (Web Transaction Security) Working Group**
  - **Requirements**
  - **Secure HTTP**
  - **Using GSS-API for web security**
  - **Security extensions for HTML**

Payments

- **W3C Security Group (members only)**

- **Joint Electronic Payment Initiative (JEPI)**
  - **W3C and CommerceNet**

- **Micro Payments**

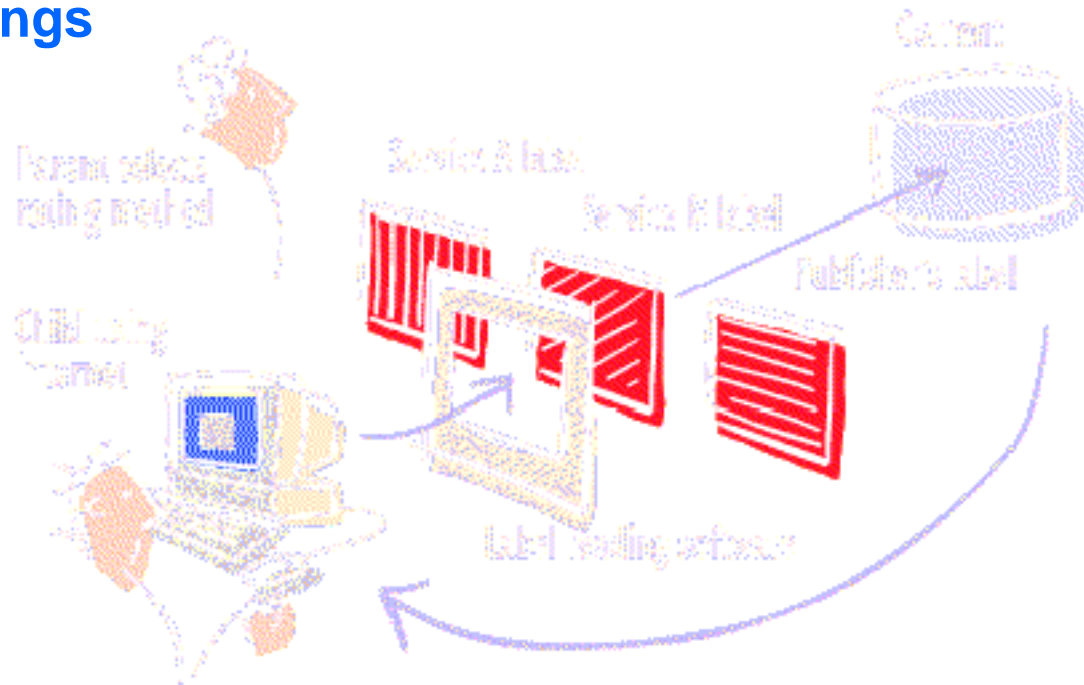# Many other E-Commerce initiatives

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Platform for Internet Content Selection

- **Goal: let users control what they and their children see**

- **User (parent) chooses what rating to permit**

- **Multi-dimensional ratings**

- **Choose between rating services**
  - **Publisher**
  - **Third party**

- **Rating service is separate from resource**
 - **Publisher cooperation not required**

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- **Content providers want to know who is visiting**
  - Advertisers want readership statistics
  - Feedback to improve the content

- **Tracking individual visitors**

- **Privacy Issues**
  - Individuals not wanting to be identified

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Internationalization

- **Non-western character sets**

- **Non-western layout**

- **Language negotiation**

- **Workshop at WWW5 Paris 6th May**
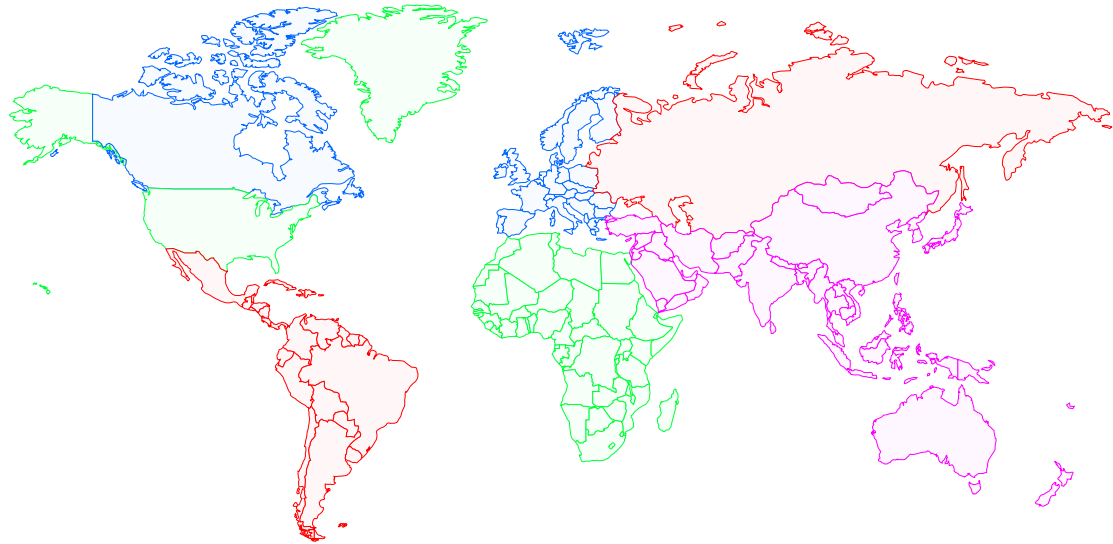
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- **Web Internationalisation and Multilinguism**
  - **i18n**

- **Language Engineering**
  - **Parallel Texts**

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Ideas for the future

- **Content labelling and legal issues**
    - **Ownership labels**
    - **Copyright and license status**

- **Collaboration, Knowledge Representation, and Automatability**

- **The use of the web for general SGML applications**

- **Special protocols for low bandwidth and disconnected operation**

- **Integration of real time channels**

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Summary

- **W3C taking an active role**
  - **New developments**
  - **Standards**
  - **Application areas**

- **Working Groups developing standards**
  - **Slowly**

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