



**NOTE: These slides have not been updated since 2003. They have been superseded by the book**

**An Introduction to XML and Web Technologies**  
**Addison-Wesley, and the accompanying online material. Please see**  
**<http://www.brics.dk/ixwt/> for more information.**

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THE XML REVOLUTION - TECHNOLOGIES FOR THE FUTURE WEB



## Problems with DTD

Top 15 reasons for avoiding DTD:

1. **not itself using XML syntax** (the SGML heritage can be very unintuitive + if using XML, DTDs could potentially themselves be syntax checked with a "meta DTD")
2. **mixed into the XML 1.0 spec** (would be much less confusing if specified separately + even non-validating processors must look at the DTD)
3. **no constraints on character data** (if character data is allowed, *any* character data is allowed)
4. **too simple attribute value models** (enumerations are clearly insufficient)
5. **cannot mix character data and regexp content models** (and the content models are generally hard to use for complex requirements)
6. **no support for Namespaces** (of course, XML 1.0 was defined before Namespaces)
7. **very limited support for modularity and reuse** (the entity mechanism is too low-level)
8. **no support for schema evolution, extension, or inheritance of declarations** (difficult to write, maintain, and read large DTDs, and to define families of related schemas)
9. **limited white-space control** (`<xml:space>` is rarely used)

10. **no embedded, structured self-documentation** (`<!-- comments -->` are not enough)
11. **content and attribute declarations cannot depend on attributes or element context** (*many* XML languages use that, but their DTDs have to "allow too much")
12. **too simple ID attribute mechanism** (no points-to requirements, uniqueness scope, etc.)
13. **only defaults for attributes, not for elements** (but that would often be convenient)
14. **cannot specify "any element" or "any attribute"** (useful for partial specifications and during schema development)
15. **defaults cannot be specified separate from the declarations** (would be convenient to have defaults in separate modules)



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