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Future Directions

- Few tools exist that capitalize on architectures (SP is the only one we know of!)
- DTD derivation tools—*visual* tools that can derive architecture A_1 from base architecture A.
  - Allows departments starting from scratch to easily build on already existing architectures.
- Generic processing tools need to be further refined and implemented for processing architecturally conformant documents (e.g. down-translate -> HTML pgm)
- Continue R&D with live data

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Example Application

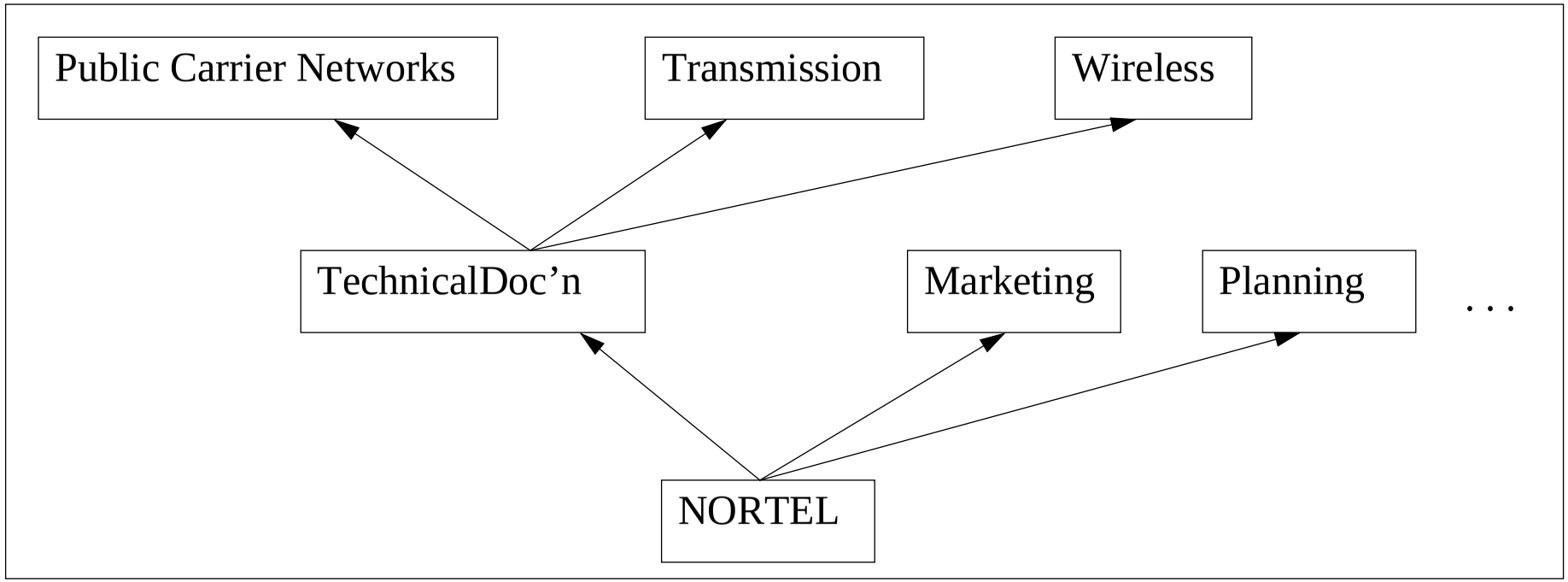
- Corporate Information Management System:
  - System being built internally to manage our documentation using SGML technology (re-use, valid content, automated publishing, decreased time-to-market, etc.)
  - Implementing SGML using our home-grown document/source code repository
- Documents in this repository will conform to various base architectures. Benefits:
  - Generic and fewer processing tools:
    - for processing a class of documents, e.g. for browsing documents conforming to Technical Doc'n architecture, we will use Netscape and a single down-translate -> HTML pgm written for that class.
    - e.g. for processing elements like Graphics / Cross-references
  - Sets the stage for re-use to occur in more predictable, controllable ways.

Content Definition Team (cont'd.)

- Team initially formed to provide way of allowing for information interchange across corporation:
  - We expect interchange to take place more across LOBs, e.g. Wireless <-> PCN, rather than across Base architectures, e.g. Tech Doc'n <-> Marketing
  - Architectures allow for this to be done more easily, e.g. we have prototyped generic tools to do this

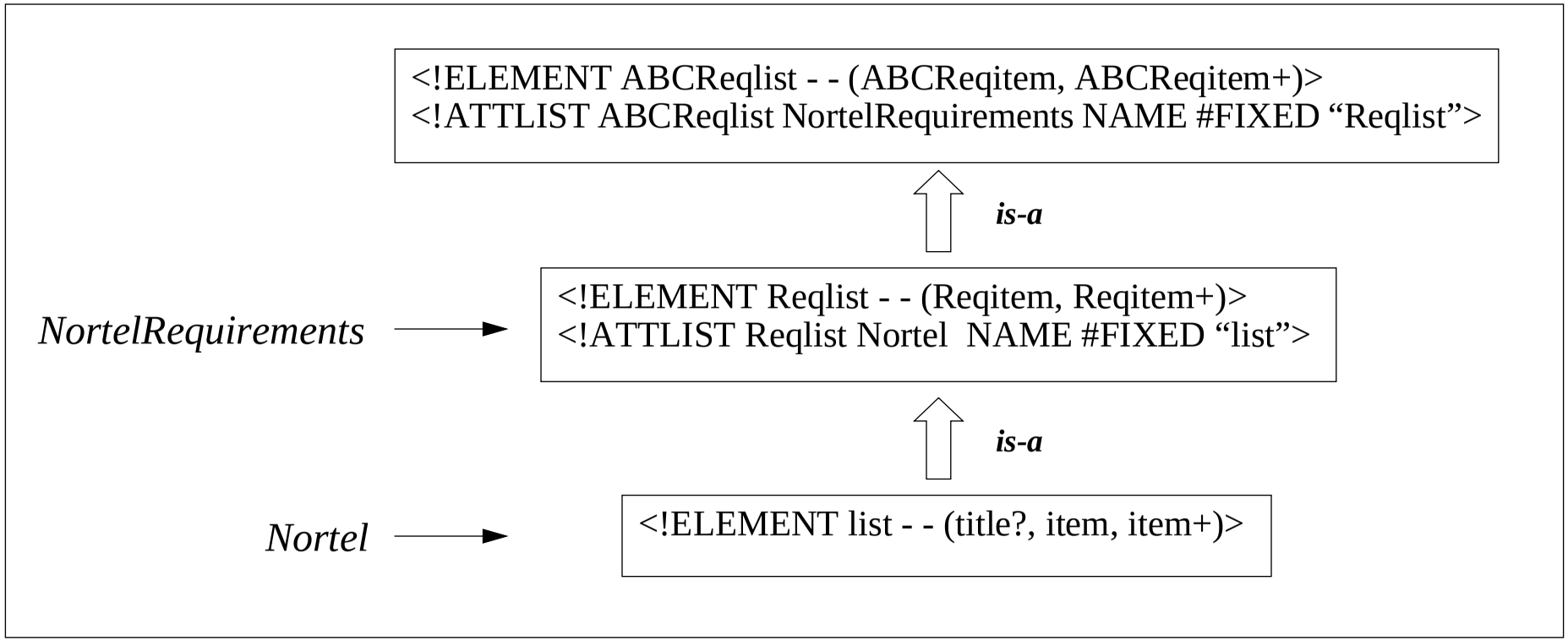
Content Definition Team

- Team formed to implement cross-corporate “source” architecture:
  - “Root” architecture from which all other Nortel architectures will be derived
  - Contains all elements deemed applicable to various types of Nortel documents: technical doc’n, marketing doc’n, product information, etc.
  - “Family” of different DTDs on which we can exert some processing control
- Our architectural hierarchy is as follows:



Architectures

- Emerged out of HyTime
- Allows us to define element and attribute class/architecture hierarchies using *architectural forms*:



- See *http://www.techno.com/sgmlarch.htm* for more info

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Background

- Nortel—international telecommunications org'n with 65K+ employees
- DTD Issues:
  - Industry standard DTD solution—clearly insufficient
  - Too large and diverse for "mother-of-all-DTDs" DTD solution
  - Let departments create their own DTDs solution => difficult to interchange information
- Hence architectures
  - Allows some control of DTD environment, yet ...
  - Does not constrain individual department's needs/creativity
  - Control affords us the ability to more easily interchange information across departments
  - Less tools need to be written for document processing; generic tools created for processing documents conforming to specific architecture
  - Valid SGML technique (—no proprietary mechanisms), e.g. SP supports architectural processing

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IAT
Information Access Technology

Using Architectures in Nortel

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