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Previously

November 2020 FCC Week

From Manuscript to Publication:
Process and Data Requirements for a Modern Publication Result

Challenges

Fulltext XML is a requirement from customers, publishers and authors.

Problems arise, when proofing is done only on the PDF and XML is created with hindsight.

TeX based formulas taken over to XML in a normalized way, resulting in layout and even semantic changes of the underlying math.
Authoring challenges

FCC Conceptual Design Reports are multi-part and highly collaborative

Typically 6-10 authors per chapter/section
Cross-authorship between chapters happens but usually the groups per chapter are quite independent
  >> challenges normal role of corresponding author as coordinator

The bibliography is a pain point for reports, particularly:
  >> where differences occur in collaborators reference libraries
  >> when multiple .bibs exist for the same project
  >> if publishers do not accept .bib files at submission

Missing packages / compilation problem when working offline
Challenges at submission

Common compilation errors
Missing files or incorrect folder structure
Missing references [??]
Custom fonts
Special characters

Bibliography
Inability to submit .bib files
   >> .bbl is a more limited and processed bibliography and not equivalent
   >> causes problems when bringing together the different chapters

Author list
Publishers require metadata input for all authors at submission
Any changes in authorship that occur between submission and revisions/final decision require authorship change approval
Template

Springer Nature LaTeX template

>> content-first approach
>> contextual help for submission preparation
>> hosted in Overleaf for collaborative online authorship
>> supports assisted submission (metadata extraction)
Early XML view

Differences between submitted source files and final proof are a pain point for research submitted in LaTeX

Moving conversion to XML upstream provides an early view of publication content

Opportunity to identify any artifacts that cannot displayed in online publication

Improved discoverability and usability
Author metadata extraction

Support for assisted submission

Extraction of article metadata (author information, title, abstract) to submission system

Reduction in effort

Reduction in error
The story behind the image

Alan Turing (1867–1934)

The scope of the achievements of Alan Turing, computer pioneer, wartime code-breaker and polymath, cannot be overstated. Renowned as the man who broke the Enigma code, Turing is also considered the father of computer science and artificial intelligence. His legacy is represented here with a visualisation of a "Turing Machine", a hypothetical device he devised to represent the logic of a computer. The binary code depicted translates to one of Turing’s memorable quotes:

Science is a differential equation. Religion is a boundary condition.