JATS: An Unexpected Journey Jenny Sherman

Senior XML Developer, Springer Nature

Abstract

In 2015, we presented our paper¹ on introducing JATS for new articles within the Macmillan publishing group. A few months later we had merged with Springer to become Springer Nature. The Springer side of the business uses a proprietary DTD (A++) and all the highly-automated production systems are based on that DTD. To utilise those same production systems for Macmillan content, we also switched to using A++. However, that's not the end of the story for using JATS within the company. This poster will show how we continued to use JATS in two different ways:



- **a** as an exchange medium for conversion of the Macmillan archive DTDs to A++, and
- □ for on-the-fly rendering of archive content on our new secure platform.

Fix frequent XML errors with XSLT

Fix rendering of JATS XML on platform





The Starting Point

- New articles already being supplied as JATS XML.
- MarkLogic NoSQL Database, where article XML in all four DTDs is stored.
- "Asset" API which returned JATS XML from MarkLogic.
- "Content Hub" API to return standardized metadata about all articles, regardless of DTD.
- Legacy http platform displaying static HTML article pages generated from in-house DTD article XML.
- Secure https platform rendering JATS XML articles from asset API and using Content Hub metadata.
- JIRA project management system.
- Mappings and XSLT developed to convert in-house DTDs to JATS.
- GitHub for XSLT version control.

Long-term conversion of archive to A++



- **Completed XSLT to convert three in-house DTDs to JATS.**
- **Continuous integration pipeline created to deploy XSLT to MarkLogic.**
- Asset API updated to return XML in original format or as JATS equivalent:
 - http://hub.nature.com/assets/v1/xml-assets/nature10770.xml? accept=application/xml
 - http://hub.nature.com/assets/v1/xml-assets/nature10770.xml? accept=application/xml;**type=jats**
- Worked with vendor (SPi) on mapping from JATS to A++.
- Feedback from SPi on errors in JATS or A++.
- □ Fix made to XML, XSLT, or JATS to A++ mapping, as appropriate.

Experimental demonstration of to × + ← → C ① Not secure | www-internal.nature.com/nature/journal/v482/n7... Q ☆ 🏥 Apps 📒 SN_HR_systems 📒 JIRA 📒 Timesheet 🐺 Slack 分 Exercism 📒 Pipelines » Other bookmark nature Archive ightarrow Volume 482 ightarrow Issue 7386 ightarrow Articles ightarrow Article VATURE | ARTICLE Editor's summary 日本語要約 Quantum computation is more prone to error that Experimental demonstration of topological error so scalable quantum computing requires the fault correction Xing-Can Yao, Tian-Xiong Wang, Hao-Ze Chen, Wei-Bo Gao, Austin G. Fowler, Robert Associated links Raussendorf, Zeng-Bing Chen, Nai-Le Liu, Chao-Yang Lu, You-Jin Deng, Yu-Ao Chen & News & Views Jian-Wei Pan Quantum computingA topological route to err correction by Franson Affiliations | Contributions | Corresponding authors Nature 482, 489-494 (23 February 2012) | doi:10.1038/nature10770 Received 26 October 2011 | Accepted 07 December 2011 | Published online 22 February 201: Editors' pick 🖄 PDF 🔮 Citation 🔍 Rights & permissions 📓 Article metrics pological cluster state • Preparation of the eight-photon cluster state • Experimental topological error The bitter battle over the world's mos popular insecticide » calable quantum computing can be achieved only if quantum bits are manipulated in a faul method that combines topological quantum naturejobs.com ection-has the highest known tolerable error rate for a loca use of cluster states with topological properties and requires lice Dean for Faculty Affairs in School of ence and Technology (SLST), ror correction with an eight-photon cluster state. We show that a correlation can be protected ainst a single error on any quantum bit. Also, when all quantum bits are simultaneously nghaiTech University ibjected to errors with equal probability, the effective error rate can be significantly reduced. C O Logout Nutrition & Diabetes



Three months to switch all content to https platform

- Regular meetings between Product Owner, XML, Content Hub and platform teams to discuss problems and prioritise work.
- Platform updated to reference API for all articles, not just native JATS.
- Web Production and stakeholders spot-check articles from previous five years and feedback issues in JIRA tickets. Work is done by comparing html version on legacy http platform with JATS version on https platform.
- Analysis of "error" to decide at which point of the workflow it is caused - source XML, XSLT, platform rendering.
- □ Errors in source XML bulk errors fixed with script or, if necessary, within the XSLT; small number of errors fixed manually.
- Incorrect or missing mapping XSLT amended and redeployed to MarkLogic.

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regnancy, breastfeeding, age at introduction to solids, dietary www.nature.com/articles/nutd201447#introduction	Treating patie			

References

1. The Long Road to JATS (2015) https://www.ncbi.nlm.nih.gov/books/NBK279831/

Contact

jenny.sherman@springernature.com

- Platform rendering code amended and redeployed.
- Verification that fix has worked and JIRA ticket signed off.

Advantages of the approach

- No physical conversion to JATS, therefore no reconversion necessary after XML fix or XSLT update – the asset API will automatically return the new version of the article.
- Quick feedback on whether a fix has worked in the expected way.
- Short project timeframe forced all involved to make pragmatic decisions, which were documented for future reference.

