Reframing "The Way We've Always Done It": Implementing an XML Workflow
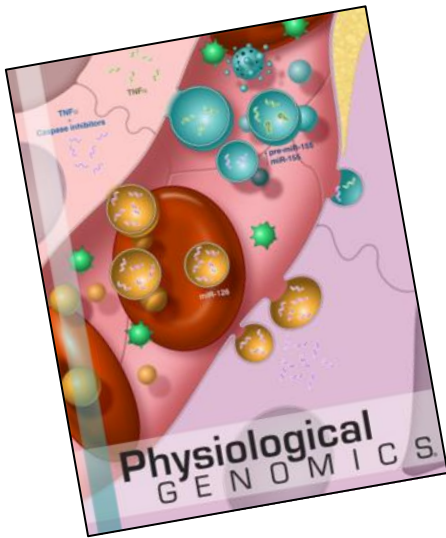
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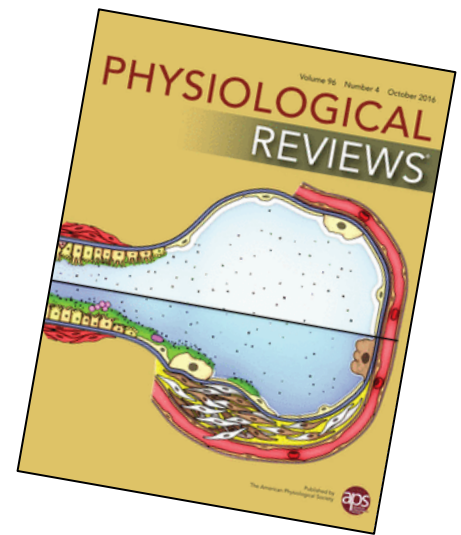
eXtyles User Group

November 10, 2016

Integrating the Life Sciences from Molecule to Organism

APS Publications

http://www.physiology.org

- APS founded in 1887; first journal content published in 1898
- 11 original research journals and 2 review journals
- 2 journals co-published with Wiley (not part of APS workflow)
- Only one title is online-only, so print still in play (for now)

- EDP Staff:
  - Editorial/Production – 11 journal supervisors, 10 copyeditors
  - Art Department (4) – reviewing figures & managing cover designs
 - Digital Publications (3) –online platform management & XML

Old Workflow

- XML metadata generated from manuscript submission system (eJournalPress)

  - sent to compositor database and to HighWire for posting of ahead-of-print version

- Homegrown "Toolkit" for manuscript cleanup

  - maintained by APS staffer for several years

  - not as robust as eXtyles and did not generate XML

- Math and tables separated from Word file before running Toolkit

- Composition system imported Toolkit codes from Word file

- Each journal had mostly the same workflow but with subtle variations in what data was collected

Old Workflow
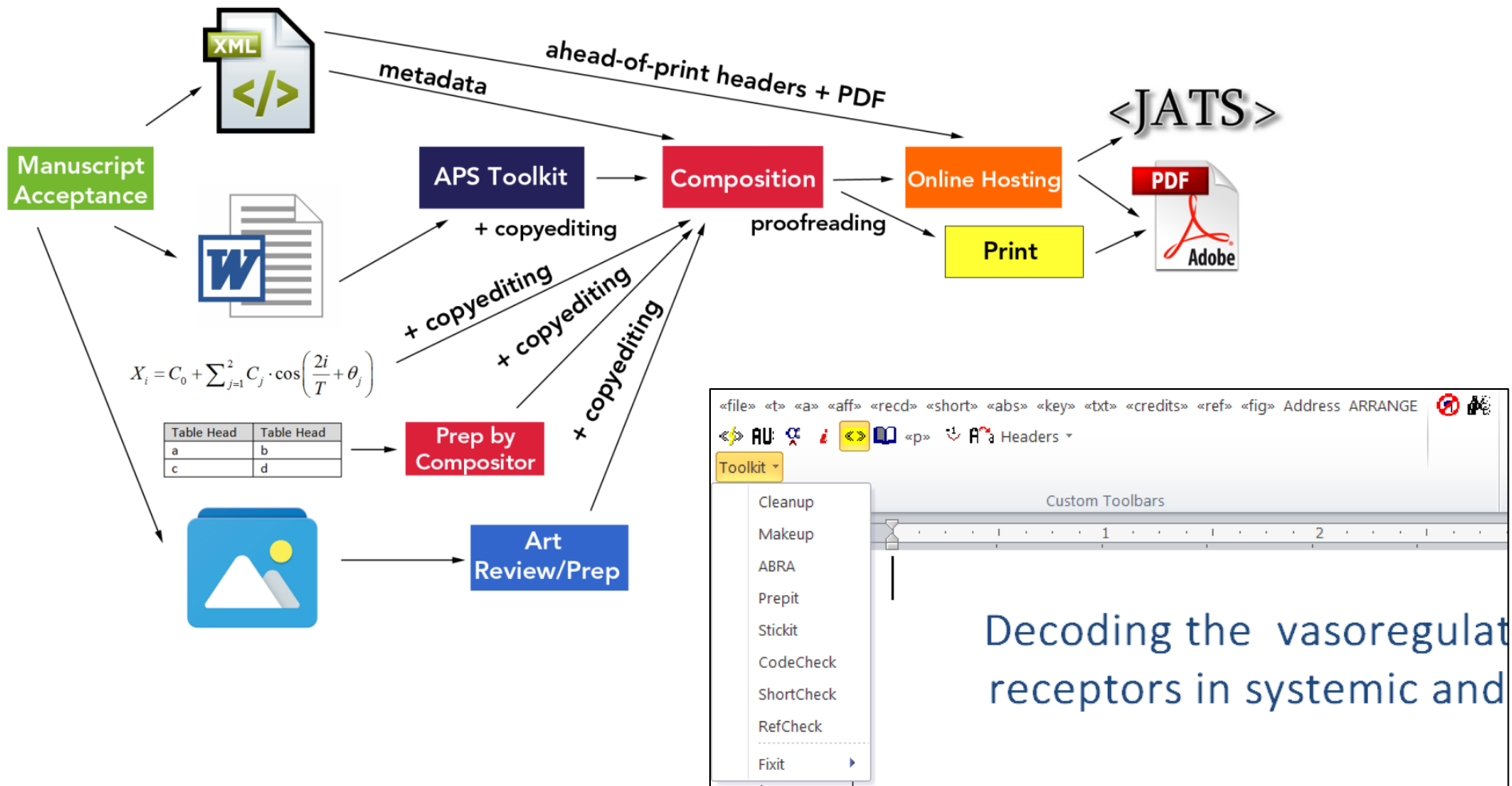
Why Change?

- We needed to replace the Toolkit with a more robust solution

- eXtyles was a natural fit with our journal content; XML contains metadata + content

- Always looking to reduce time to publication

- Re-keying of tables and equations = errors

- Felt it was time to get away from a focus on the PDF and more on content

- Want more control over our content and metadata generation

New Workflow

- Summer 2016: began eXtyles pilot with one title

- Currently have 6 titles in XML workflow; rolling out two titles at a time as comp is ready

- All in-house copyeditors and journal supervisors using eXtyles (but not freelancers)

- Math and table prep no longer handled by comp

- All eXtyled MSS reviewed before sending to comp
 - Looking for user styling errors
  - Running schematron on XML

New Workflow
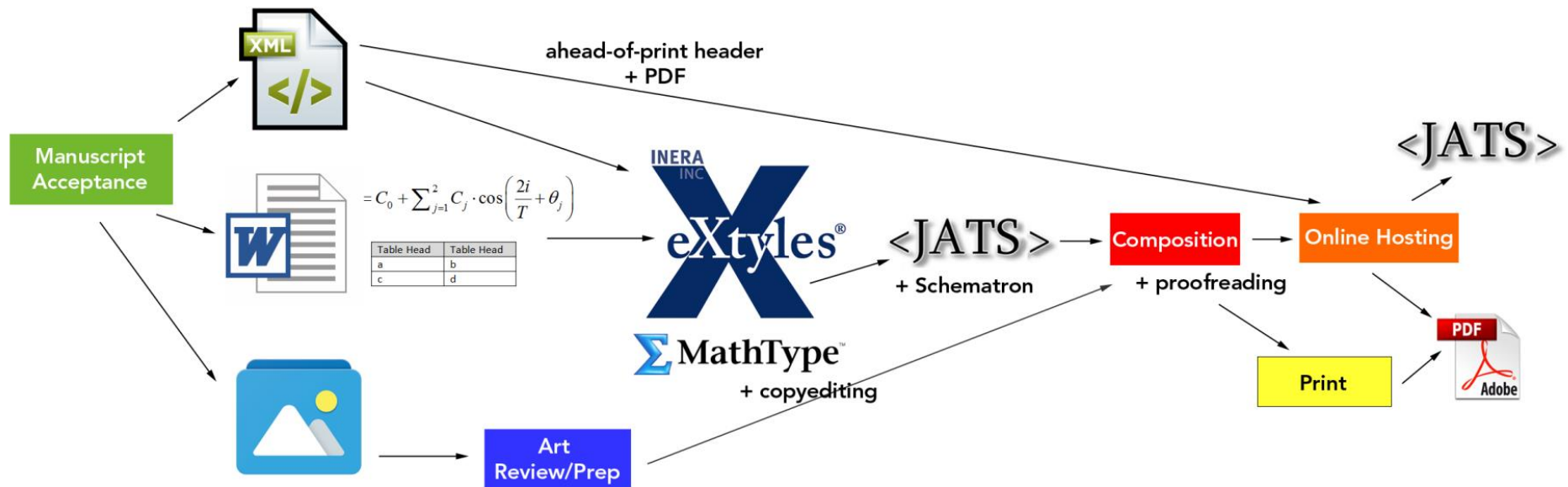
Expected Challenges

- Learning eXtyles: different levels of comfort; change is hard

- Learning MathType: eXtylers not used to working with math in Word

- In-house resources: deciding between a "centralized" vs. "individualized" eXtyles workflow

- "Why? Because that's the way we've always done it."

- "But that's not the way it looks in the PDF"

- Compositor had never worked with XML-in workflow

- Meeting expectations of compositor and online host

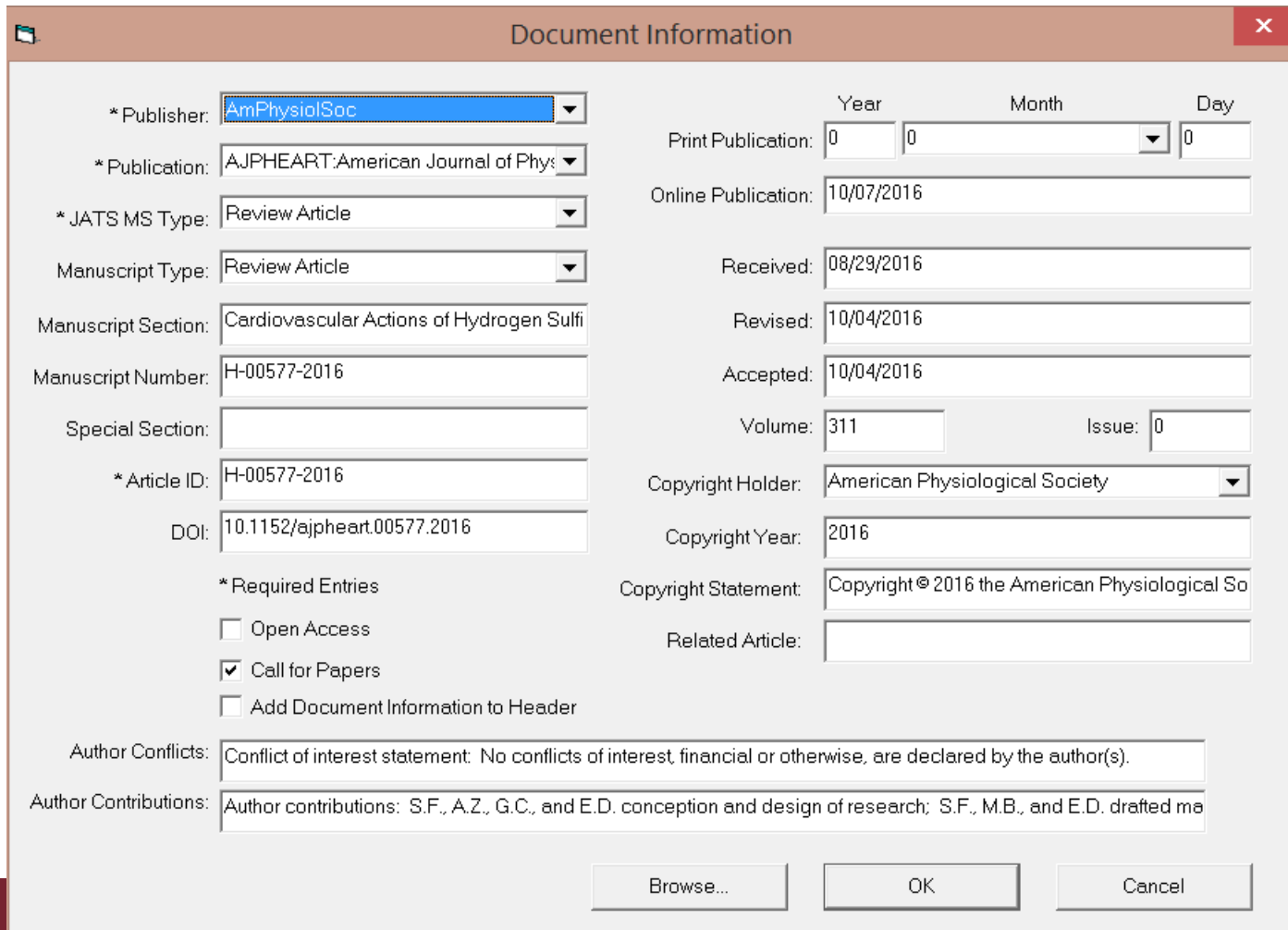*(Is what they recommend best practice?)*
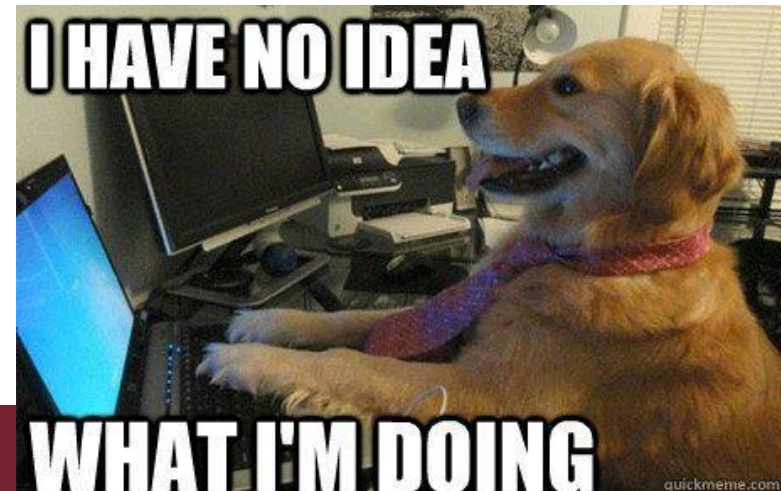
I HAVE NO IDEA WHAT I'M DOING

Unexpected Challenges

Metadata messiness – article types vs. TOC headings vs. PDF mastheads

Revised the Document Information metadata setup many, MANY times

Metadata messiness – Article Type vs. @article-type

A matrix showing which article types (columns) are used by each journal (rows: Cell, Endo, GI, Heart, Lung, Regu, Renal, JAPPL, JN, PG, Advances*, Physiol**, PRV). Columns: Rapid Report, Research Article, Review Article, Perspectives, Innovative Methodology, Editorial, Editorial Focus, Letter to the Editor, Themes, Synthesis, Viewpoint, Point-Counterpoint, Neuro Forum, Methods in Cell Physiology, Frontiers, Mini-Reviews, Physiology in Medicine, Young Investigator Perspectives, Case Studies in Physiology, Cores of Reproducibility in Phy...

Color key:
- **Research Article**
- **Review Article**
- **Editorial**

*Additional article types for *Advances*
- How We Teach: Generalizable Education Research
- How We Teach: Classroom and Laboratory Research Pr
- Laboratory Sourcebook
- Historical Perspectives
- Personal Views
- Staying Current
- Illuminations
- Meeting Reports and Announcements

**Additional article types for *Physiology*
- Physiology's Impact
- Physiology in Perspective
- Physiology Is Medicine
- Physiology Education
- Physiology Education: Student's Corner

Metadata messiness – Article Type vs. @article-type

Article Type	JATS (article-type="____")	Change to:
Rapid Report	research-article	Make consistent across all titles (case-report used for some journals)
Research Article	research-article	
Review Article	review-article	
Perspectives	research-article	editorial(?) – Lung and PG say more like reviews
Innovative Methodology	research-article	
Editorial	editorial	

Other Metadata Modifications

- No more assigning more than one category to an article

- Eliminating "Special Sections"

- Eliminating "Call for Papers" moniker in headers

```
<article-categories>
<subj-group subj-group-type="heading">
<subject>Research Article</subject></subj-group>
<series-title>Cellular Responses to Hypoxia</series-title>
</article-categories>
…
<custom-meta-group>
<custom-meta><meta-name>Call for Papers</meta-name><meta-value>True</meta-value></custom-meta>
</custom-meta-group>
```


article type   topic

Am J Physiol Cell Physiol 311: C482–C497, 2016.
First published July 13, 2016; doi:10.1152/ajpcell.00324.2015.

RESEARCH ARTICLE
~~CALL FOR PAPERS~~ | *Cellular Responses to Hypoxia*

Bortezomib alleviates experimental pulmonary hypertension by regulating intracellular calcium homeostasis in PASMCs

Jun Zhang,[1]* Wenju Lu,[1]* Yuqin Chen,[1] Qian Jiang,[1] Kai Yang,[1] Meichan Li,[1] Ziyi Wang,[1] Xin Duan,[4] Lei Xu,[5] Haiyang Tang,[2] Dejun Sun,[3] and Jian Wang[1,2,3]

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Submitted 10 November 2015; accepted in final form 27 June 2016

Other Unexpected Challenges

- **IT resources (new versions and patches installed on desktops and VDIs)**

- **Level of competency with Word lower than expected**

`<!--Insert plug for Inera's Word Tips and Tricks session here-->`

Lessons Learned

- ## There is no such thing as too much training (esp. one-on-one)

  - Screencasts for remote workers have been very helpful

- ## Need for clear instructions for eXtylers and also for authors

  - In-house wiki houses a living document (cheat sheet) to help with coding guidelines; revising Information for Authors

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Affiliations

Place each affiliation in a **separate paragraph** that starts with a superscript number, with a semicolon at the end of each line (with next-to-last li

article-title	Decoding·the·vasoregulatory·activities·of·bile·acid·activated·receptors·in·systemic·and·portal· circulation:·role·of·gaseous·mediators¶
author	Stefano·Fiorucci[1],·Angela·Zampella[2],·Giuseppe·Cirino[2],·Mariarosaria·Bucci[2],·and·Eleonora· Distrutti[3]¶
affiliation	[1]Department·of·Surgical·and·Biomedical·Sciences,·University·of·Perugia,·Perugia,·Italy;¶
affiliation	[2]Department·of·Pharmacy,·University·of·Naples·'Federico·II',·Naples,·Italy;·and¶
affiliation	[3]Azienda·Ospedaliera·di·Perugia,·Italy¶
running-head	BILE·ACIDS·AND·GASEOMEDIATORS¶
corresponding-au	Address·for·reprint·requests·and·other·correspondence:·Prof.·Stefano·Fiorucci,·Perugia,

NOTE: Do not manually add italics.

Note about placement: Affliliations need to immediate follow the author line in order to avoid a parsing error

Next Steps

- Continued streamlining of workflow (metadata)

- More QA – more schematron rules; metadata cleanup after acceptance (pre-ahead-of-print); how will this be managed?

- XML training and diagnosis of parsing errors

- More MathType training

- Always thinking about the "big picture" and implications
  - Author guidelines
  - Author-submitted metadata
  - Article metadata and content iterations
  - Online presentation vs. PDF presentation
  - Downstream events

Thank you!

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