

# Bioc Technical Advisory Board Minutes

7 December 2023

**Present:** Vince Carey, Charlotte Soneson, Kasper Hansen, Lori Kern, Michael Love, Wolfgang Huber, Laurent Gatto, Maria Doyle, Helena Crowell, Robert Shear, Levi Waldron, Rafael Irizarry, Sean Davis, Marcel Ramos, Brian Schilder, Alexandru Mahmoud, Ludwig Geistlinger, Henrik Bengtsson, Stephanie Hicks, Jen Wokaty

**Apologies:** Davide Risso

:02 - :03 Welcome, previous [minutes](#) approved

- Voting procedure going forward will likely be via Google Form.

:03 - :23 Governance revision discussion. Comments:

- Main addition: formalization of working groups; reporting of working groups to the board.
- Reporting to be done (at least) quarterly rather than monthly.
- Every working group could have a possibility to give updates every meeting, but not a requirement.
- Is it premature to change the governance?
- Galaxy working groups are performing tasks that are similar to those of the Bioconductor core team.
- What happens if a working group doesn't report for an extended period of time? Report can also be that nothing has been done for the past 3 months.
- What if there are too many working groups that want to provide updates? The exec committee still has to set the agenda. CAB has a rotating schedule of working groups - exec group responsible for setting the schedule. Updates can be put into a separate document.
- Action item: propose comments to the governance document, voting could be done before the next TAB call (or discussion can continue at that point).

:23 - :32 Rafa: comments on spatial genomics methods support

- started to port [spacexr](#) to Bioconductor - provides cell type classification for pixels (including mixture of pixels).
- Q: Is it worth moving data representation to a Bioc class? Would like representation to be simple, not a huge class with obscure, poorly documented and hard-to-remember accessors.
- Starting to get multi-sample spatial data (Stephanie as well) - would be useful to keep information about sample identity in the object.
- Bespoke data structure makes integration with other packages harder. If idiosyncratic ways of adding x and y to SummarizedExperiment becomes the norm, it'll be confusing.
- SpatialExperiment may be a possibility. SummarizedExperiment + x/y coordinates + sample label.

:32 - :49 Sean: Illustration of GitHub Copilot

- <https://github.com/features/copilot>.
- <https://education.github.com/> (to apply for educator/student status).
- Specific LLM built on top of GPT4, trained on public GitHub repos.
- Context is obtained from the working environment/project.
- In RStudio: Activate/control settings via Tools - Global Options - Copilot.
- Q: How long does GitHub keep your context?
  - "GitHub Copilot does not use Prompts or Suggestions to train AI models. These inputs are not retained or utilized in the training process of AI models for GitHub Copilot". (<https://github.com/features/copilot>)
- Potential for violation of institutional rules? Read Terms of Service carefully. Enterprise versions exist.
- Fine-tuning -> Bioc Copilot? Trained specifically on Bioc code.
  - Retrieval augmented generation pulls information from documents similar to a specific target into the context.
  - Copilot already knows a lot about Bioconductor style and content.
- LLM for Bioc support forum bot - feasible?
- Cloud working group discussed how to leverage activities on GitHub (especially GitHub Actions). Get in touch with GitHub team for a Q&A session.

:49 - :60 Maria/Lori: Transition to new web site design

- Newcomer-oriented.
- New design is more accessible.
- Modifications made based on feedback survey
- <http://new.bioconductor.org>
- Responsive design (can work on mobile up to a point).
- Additional work: enhancing search.
- Concerns about moving this over to bioconductor.org?
- Is there room for putting in some CI/CD aspects (e.g. a preview for PRs, link checking etc)? Some things are built in already (can also be used/tested locally).
- What about adding About -> Funding / Collaborations pages. Mentioning key converters and packages/facilities is a good idea.
- Package landing pages - dark background hard to read.
- Modification of main landing page (less 'corporate' style/autogenerated text).
- Lori will add questions and requests for feedback to #biocwebsite slack channel for further discussion.
- Points for future discussions:
  - Technical implementation (hosting, proxies).
  - Development process (dev/test/prod, testing, linting, link checking, etc.).
  - Roles and responsibilities.
  - Metrics and monitoring.
  - science.bioconductor.org – a way of conveying technical accomplishments and assets more directly. Possible implementation via wiki, see [bugsigdb.org](https://bugsigdb.org). Could have invited and contributed workflow explanations.