DRAFT

PROPOSAL

Project Structure & Governance

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History: ACTS project

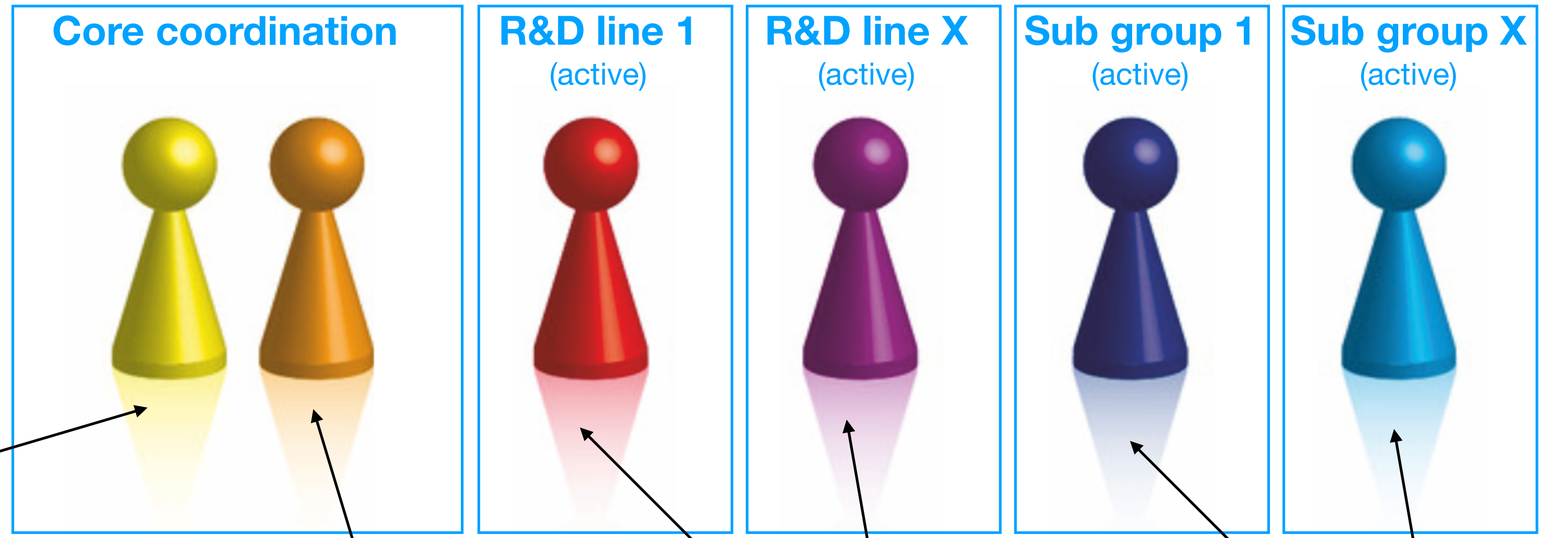
- First commit to ACTS GitLab (before we moved to GitHub)
  - Nov 11, 2015
  - We are reaching 10 years !

- Immense progress in features covered by the toolbox

- Increasing number of clients and users
  - Starting with ATLAS vertex reconstruction for Run-3
  - sPHENIX was an early adopter
  - EIC/EPIC becoming a strong community
  - ATLAS ITk reached “break”-even milestone this autumn
  - Growing number of small experiments

Proposal: ACTS project structure

- Formalize ACTS coordination team:



Project coordinator
interaction with experiments/ community, person power/ staffing, support, documentation, Publications, workshop organisation

Technical coordinator
infrastructure, harmonisation of core and R&D line(s), technical Interplay with experiments

One coordinator
per active R&D line

One coordinator
per active sub group

Proposal: ACTS project structure

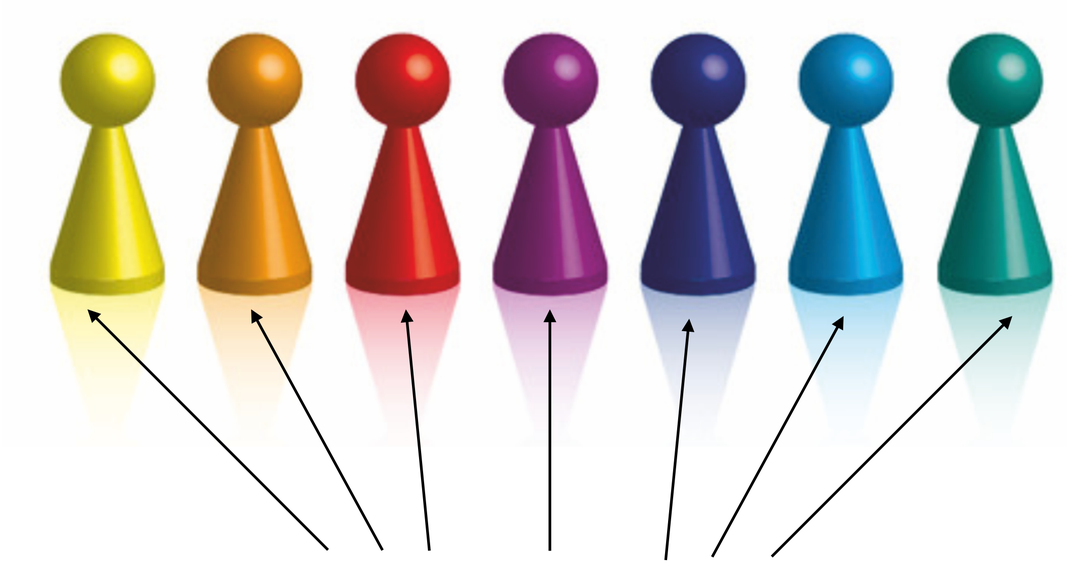
- Formalize ACTS coordination team:

Composition: ACTS coordination

The ACTS project coordination consists of two co-coordinators for the ACTS baseline toolkit and the project overall: one coordinator will take the role of the **project coordinator** with responsibilities of exchange with the experiments, establishing new connections, organizing the workshop, documentation and publications. In addition, the project coordinator also should ensure sufficient staffing for development and support in cooperation with the experiments and contributing groups. The **technical coordinator** focuses on technical integration of the ACTS into experiment software stack, improving of cross-checking and oversees the technical coherence of the project including the R&D lines and sub projects. The coordination team also includes **one coordinator per active R&D line**, and **one representative of each sub groups** that cover specific aspects of the ACTS toolkit in their respective fora.

Proposal: ACTS liaison

- Formalize ACTS liaison contacts:



Experiment liaison contacts (to be named by the experiments)

- ensure/monitor technical compatibility (aided by automated testing suites)
- give input to the release scheduling discussions
- should be present at the weekly developers meeting (make use of alternating time for contributors from Asia)

Proposal: ACTS liaison

- Formalize ACTS liaison contacts:

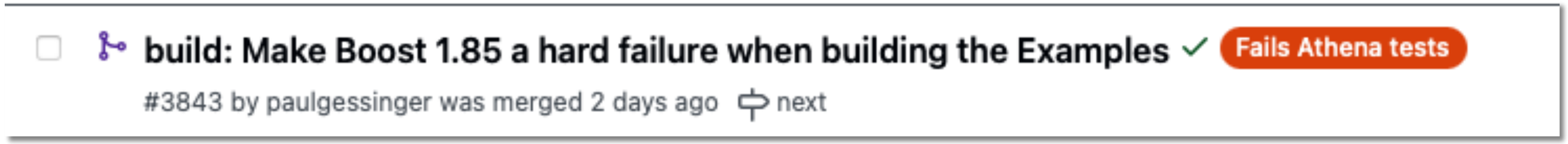
Mandate: Liaison

The liaison contact should be present in the weekly developers meeting, where the ongoing pull requests and feature updates are discussed, but also topical discussions regarding the toolkit features take place. Particular focus should be drawn on API changing updates and upcoming release builds, which will trigger updates to the client software stack. The implementation of an automated testing procedure as described in section 1.2 is strongly advised, ideally with associated labels that are triggered when experiment and client code is broken by a opened PR.

The ACTS-experiment/group liaison contacts should be listed on the ACTS project page in order to enhance their visibility within their respective communities.

Proposal: ACTS liaison & technical integration

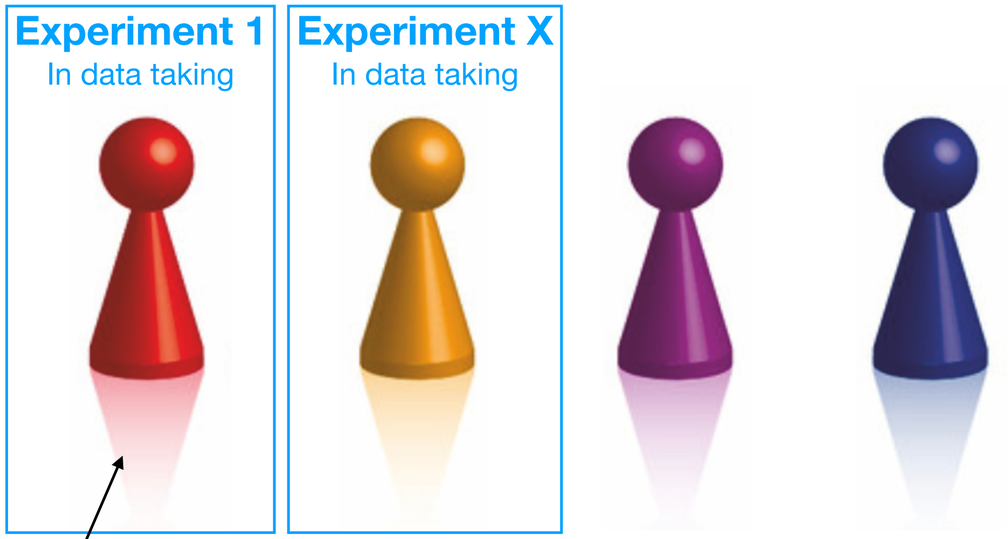
- With ATLAS we have implemented a very successful testing infrastructure
  - Reports back if a PR breaks the current ATLAS integration
  - Allows to collect breaking chances for ATLAS and bundle them
  - Usually results in one ATHENA MR to react to a new ACTS version



- We should make this as much as possible a working model for clients
  - Has (of course) its difficulties and particularities with integrating that with CI/local resources

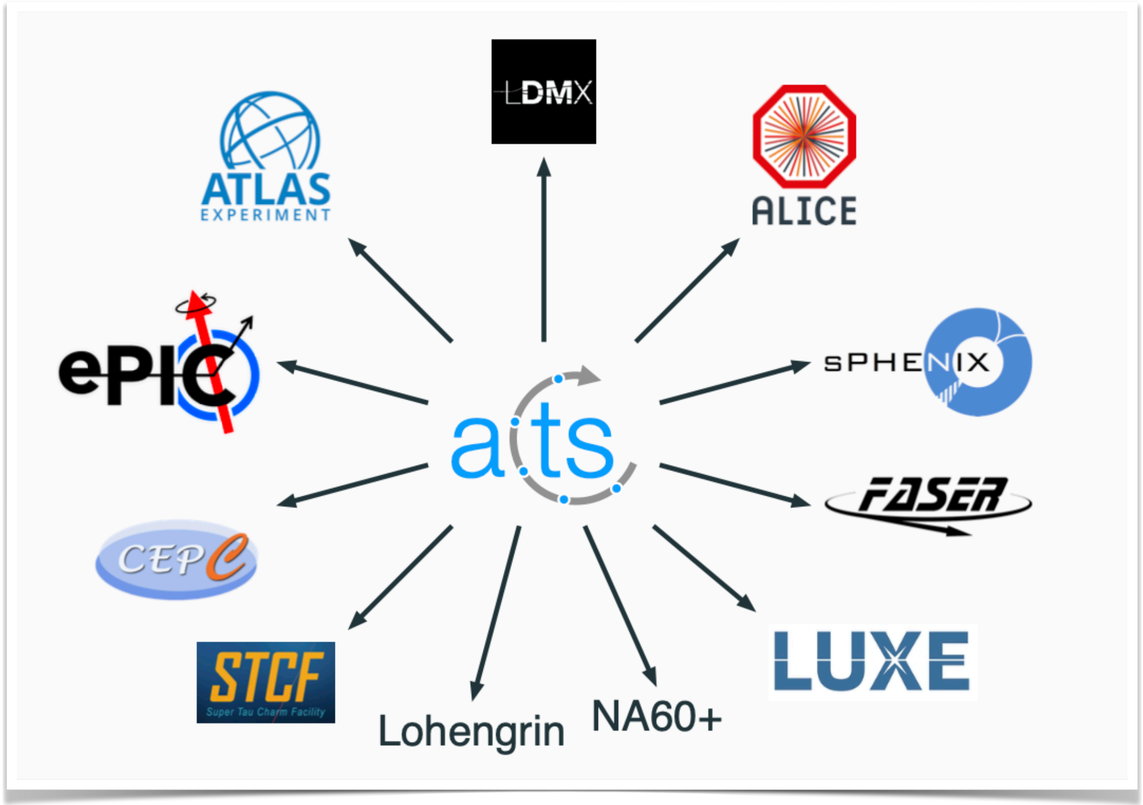
Proposal: ACTS advisory board

- Formalize and ACTS advisory board



Invite Experiments to nominate persons

What's our **threshold** for this invitation?



From Paul's talk

Proposal: ACTS advisory board

- Formalize and ACTS advisory board

Mandate: Advisory board

The advisory board shall meet at least once a year in order to discuss the status of the project, with a particular focus on the long term prospect of maintenence, feature set and suitability for experiments/clients needs. It should give a set of recommendations on the project organization structure, prioritization aspects and harmonization between the sub projects and R&D lines. The advisory board will be given a forum at the yearly developer workshop either in form of a talk or a discussion session to present and discuss eventual recommendations with the community.

Proposal: Spell out light rules on authorship

- **Inclusive** over **exclusive**

2.3 Authorship

Experiment/client publications: As an open software project under MPL 2.0 [2], experiments/clients are allowed to publish documents or all sorts using the ACTS toolkit, without including the ACTS developers in their respective author list. However, wherever applicable, we ask to refer to either the ACTS project description [1] or if a more technical reference is needed, the software reference [**acts˙zenodo**] in order to credit the work of the ACTS developers.

ACTS publications: Within ACTS, we propose an inclusive rather than exclusive approach to publications; we encourage contributions to the ACTS project in all sorts, not only on a purely technical level. Hence, publications that cover developments within the ACTS project should reflect an inclusive list of persons that have contributed to the development as a whole. Content that covers eventual confidential experiment data must first be approved and released by the experiments internal regulations before appearing in ACTS publications.

Entry: ACTS project site

- New entry site as https://github.com/acts-project

Acts

README.md

The ACTS (A Common Tracking Sofware) Project

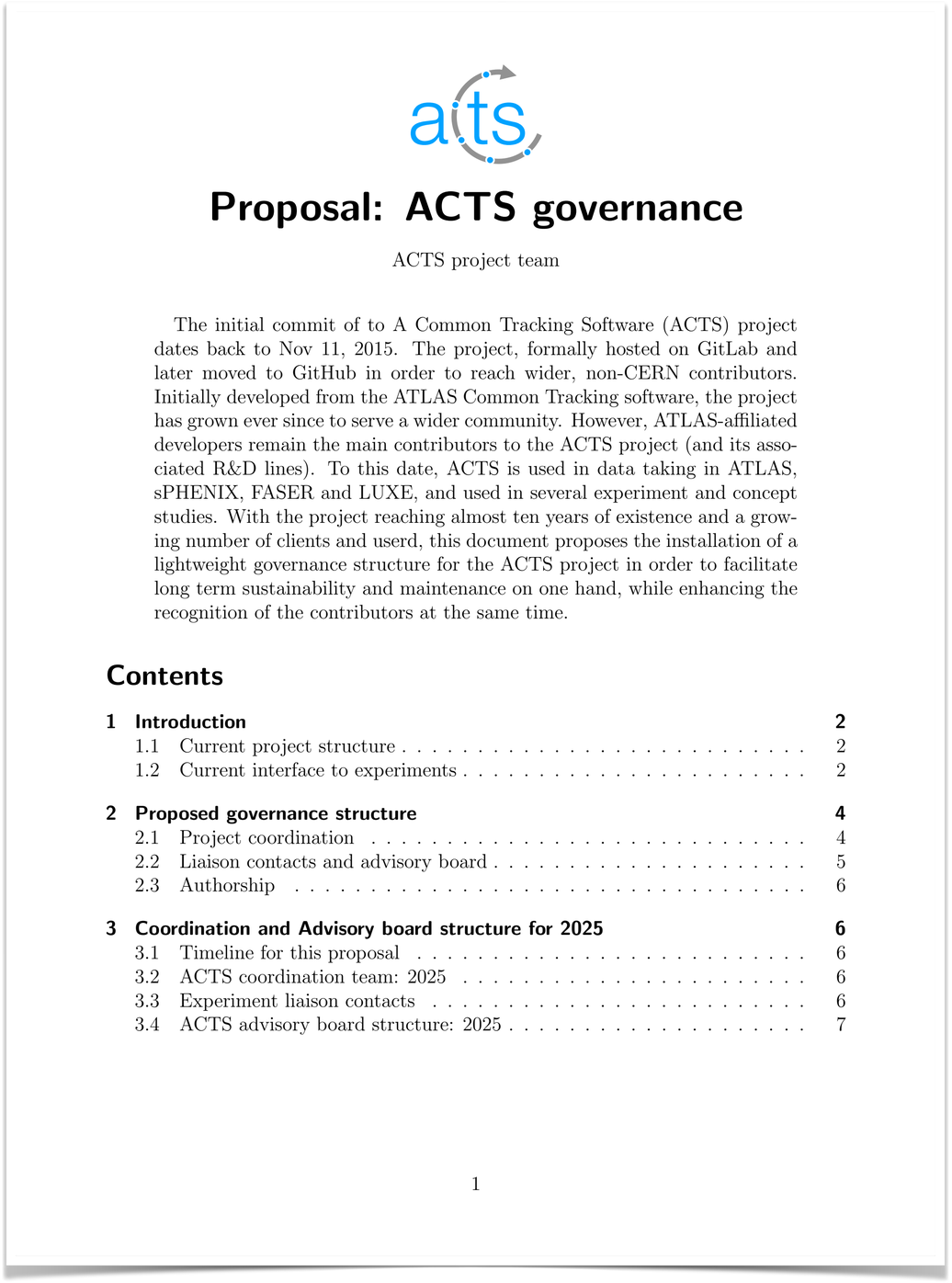
The ACTS project was launched in 2016 as a feasibility study aiming to encapsulate the common and re-usable components of the ATLAS Common Tracking Software for broader use in the community. From the very beginning it was targetting at high quality, generic, modernly designed components that can be used to assemble track and vertex reconstruction applications for high energy, nuclear and heay ion physics experiments.

The ACTS core project implements event data model, geometry, and tracking and vertexing tools in C++, following the C++20 standard, and aims at minimal dependecies for the core software stack. However, customizable extensions and interface layers to community libraries are available and can be augmented to the core package.

Project organization

Proposal: Timeline

- Proposal is spelled out as a first draft
  - Attached to this contribution
- Suggest that we use this week
  - Bring it to a Draft 0 stage
  - Send it out to Experiments **~O(1 week)**
  - Ask for feedback **until end of year**
- Schedule a final discussion/decision
  - Early next year / developers meeting
  - Turn it into an ACTS white paper
  - Implement!



Proposal: ACTS governance

ACTS project team

The initial commit of to A Common Tracking Software (ACTS) project dates back to Nov 11, 2015. The project, formally hosted on GitLab and later moved to GitHub in order to reach wider, non-CERN contributors. Initially developed from the ATLAS Common Tracking software, the project has grown ever since to serve a wider community. However, ATLAS-affiliated developers remain the main contributors to the ACTS project (and its associated R&D lines). To this date, ACTS is used in data taking in ATLAS, sPHENIX, FASER and LUXE, and used in several experiment and concept studies. With the project reaching almost ten years of existence and a growing number of clients and userd, this document proposes the installation of a lightweight governance structure for the ACTS project in order to facilitate long term sustainability and maintenance on one hand, while enhancing the recognition of the contributors at the same time.

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