Enhancing Community Engagement through Improved Documentation: BIRDS Open-Source Updates and Research Insights

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BIRDS Open-Source Webinar

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Background

CubeSats are transforming space research/education with:

- Low-cost, modular designs.

- Standardized bus architectures.

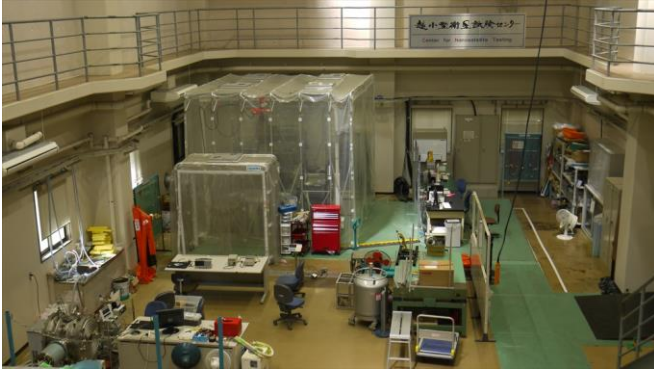*BIRDS Bus Is An Open Source Bus System for Academic Satellites*

Background

BIRDS Vision: empower emerging spacefaring nations to jumpstart their space sectors by adopting and adapting the BIRDS bus system

BIRDS Bus Is An Open Source Bus System for Academic Satellites
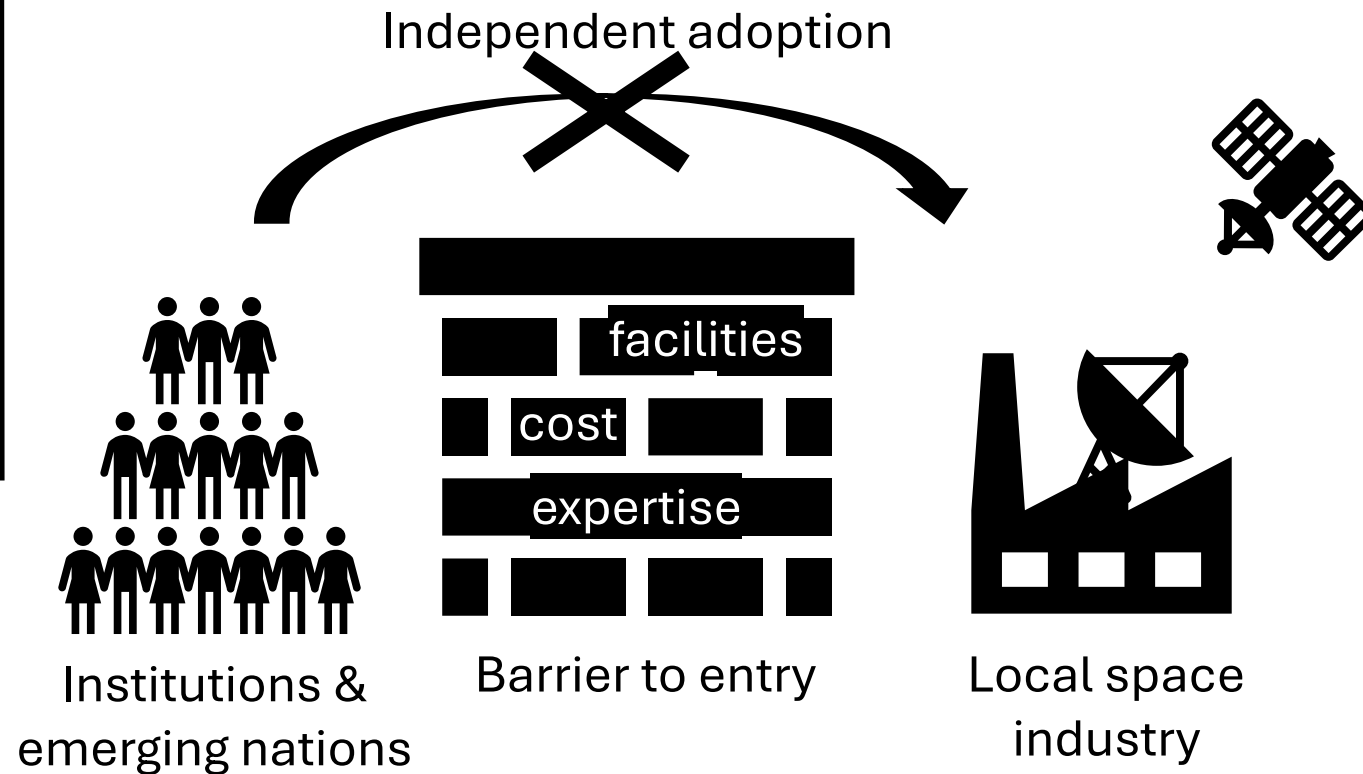
Background

Users prefer to collaborate with Kyutech to leverage its facilities and the expertise of its trained staff due to limited experience with CubeSat development.

BIRDS Bus Is An Open Source Bus System for Academic Satellites

Background

Independent adoption

facilities

cost

expertise

Institutions & emerging nations

Barrier to entry

Local space industry

A key barrier to independent adoption of the full BIRDS package (hardware and software) has been identified as the lack of clear, comprehensive, and accessible technical documentation.

BIRDS Bus Is An Open Source Bus System for Academic Satellites

Challenges

Fragmented, text-heavy documentation.

On GitHub, more than 35 repositories are used to store resources and information.
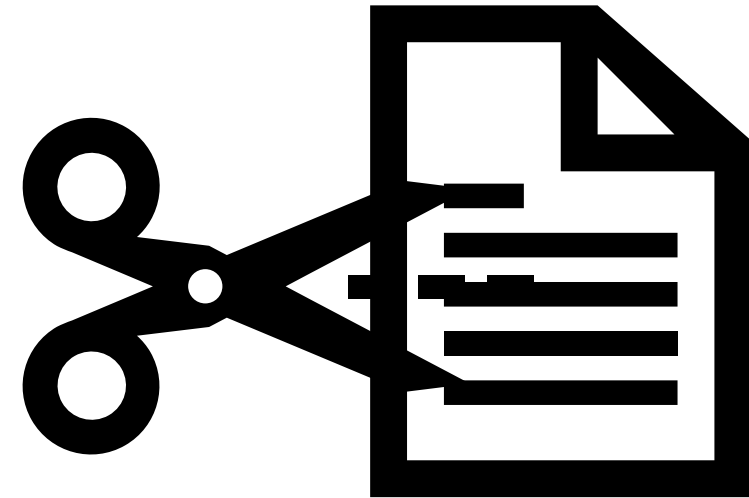
Better docs → Faster onboarding → More reuse → Accelerated innovation

Challenges

No change tracker between models

Changes are not always clearly documented, and there is often no official changelog to track differences between satellite models.
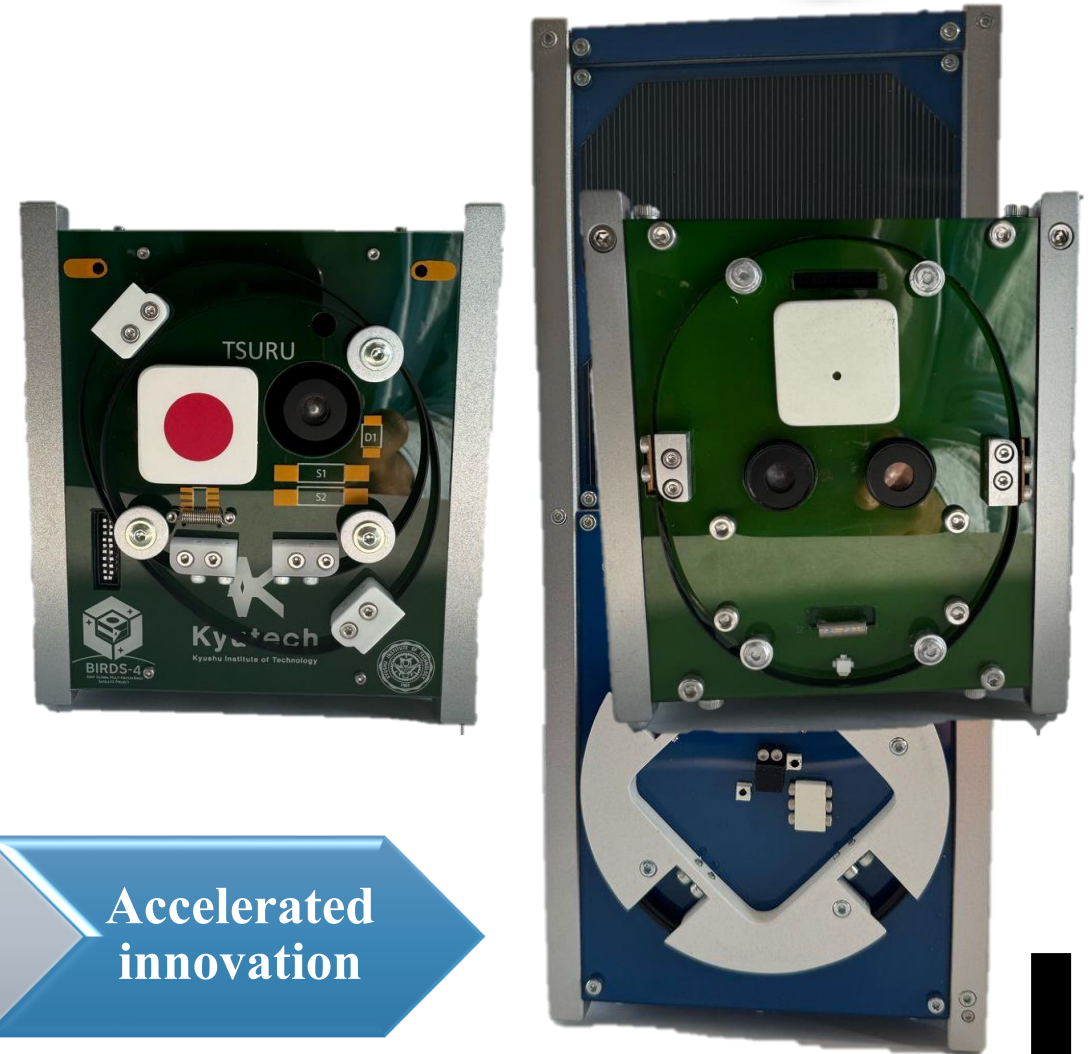
Better docs

Faster onboarding

More reuse

Accelerated innovation

Challenges

Ignores systems engineering approach

There is a lack of templates, examples, and guidance on the correct sequence of steps to use the resources effectively.
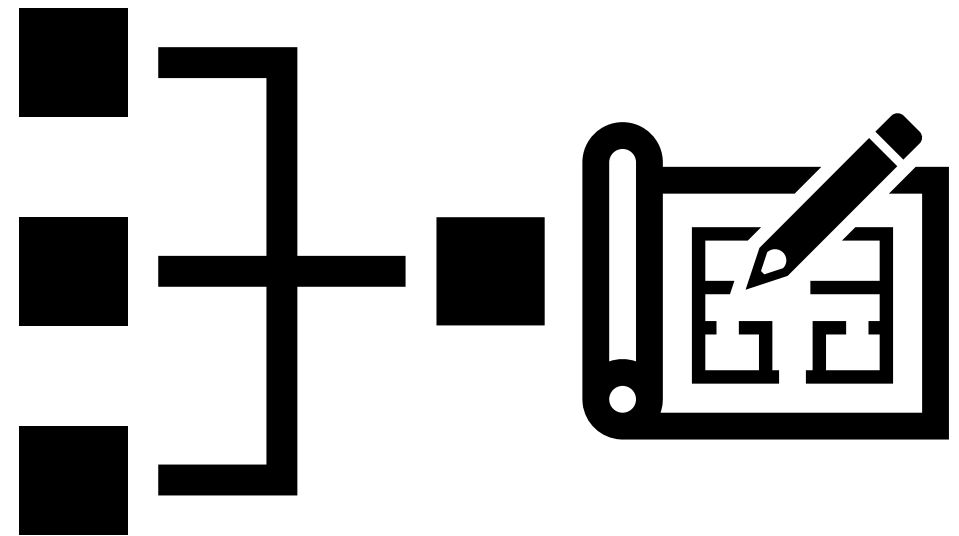
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Challenges

Inconsistent style

Documentation suffers from inconsistencies in style and design. Naming conventions of files and folders vary between projects.

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Updates Overview

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Live Walkthrough

Feedback