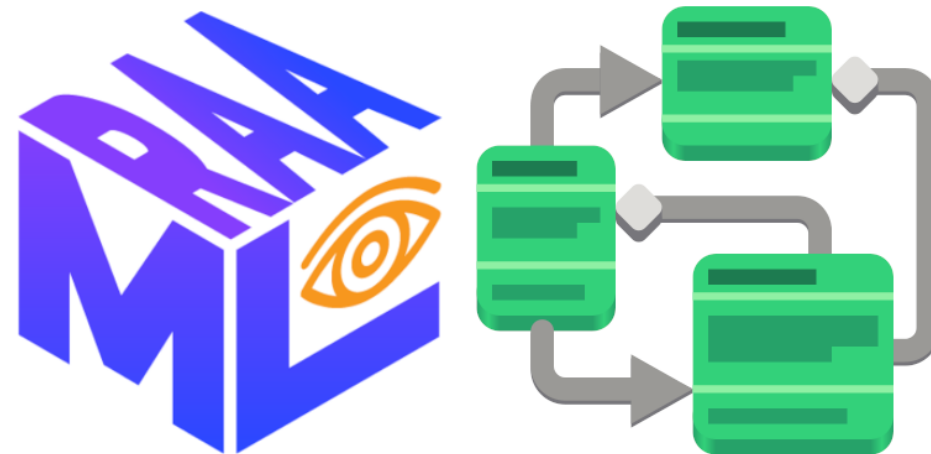


# OPEN STPA WITH RAAML AND GAPHOR



2021 STAMP Workshop

Dan Yeaw & Kyle Post



# A VIBRANT COMMUNITY

We want to build an open community for systems safety

- A low barrier to join, learn, and grow 
- Diverse contributors who want to help 
- Built on open standards and open source software

# SAFETY STANDARDS

- Each industry has developed domain specific standards, most derived from IEC 61508
- New techniques, like STPA, can improve how we do safety analysis
- However, may lack rigor without a standardized and consistent language and automation

# RAAML

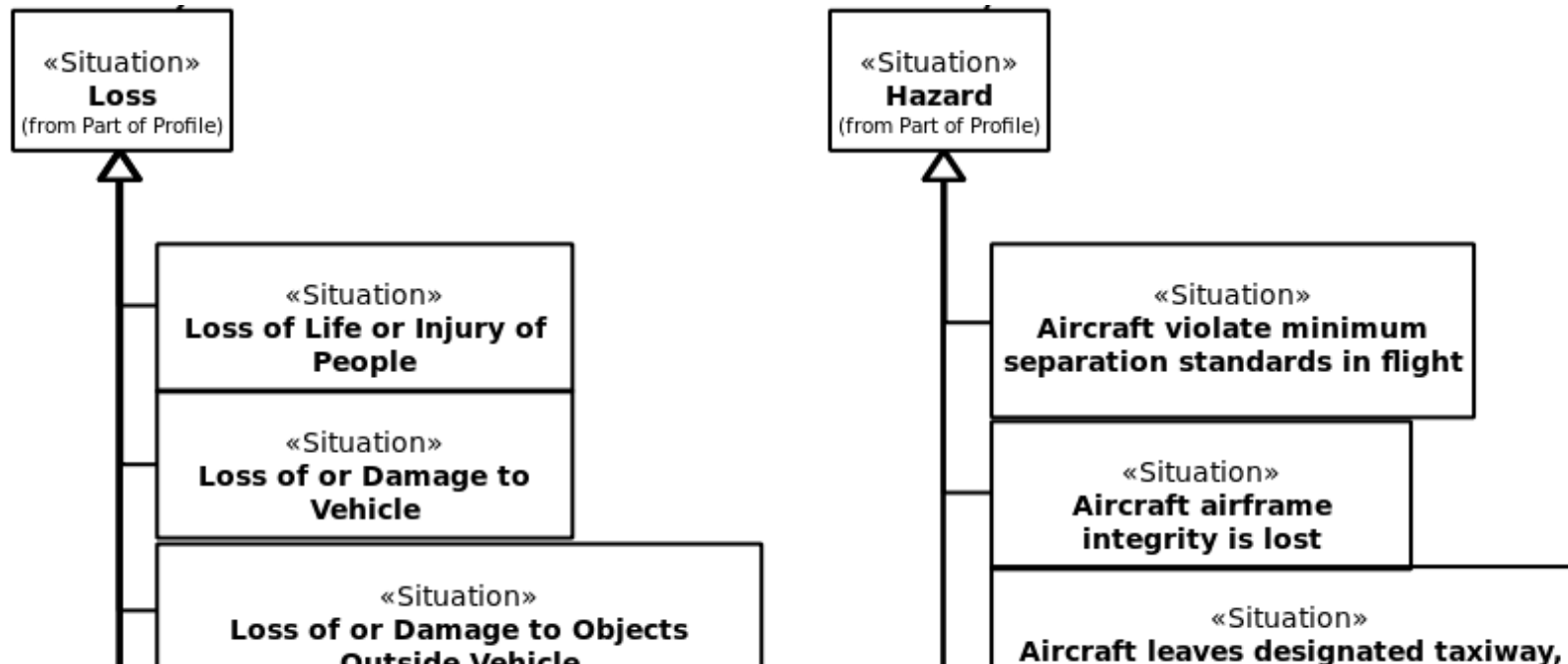
- Precise language for systems safety
- OMG spec 1.0 beta available, final release soon
- STPA metamodel library based on the STPA Handbook
- Facilitates exchange of info between tools and organizations

# GAPHOR

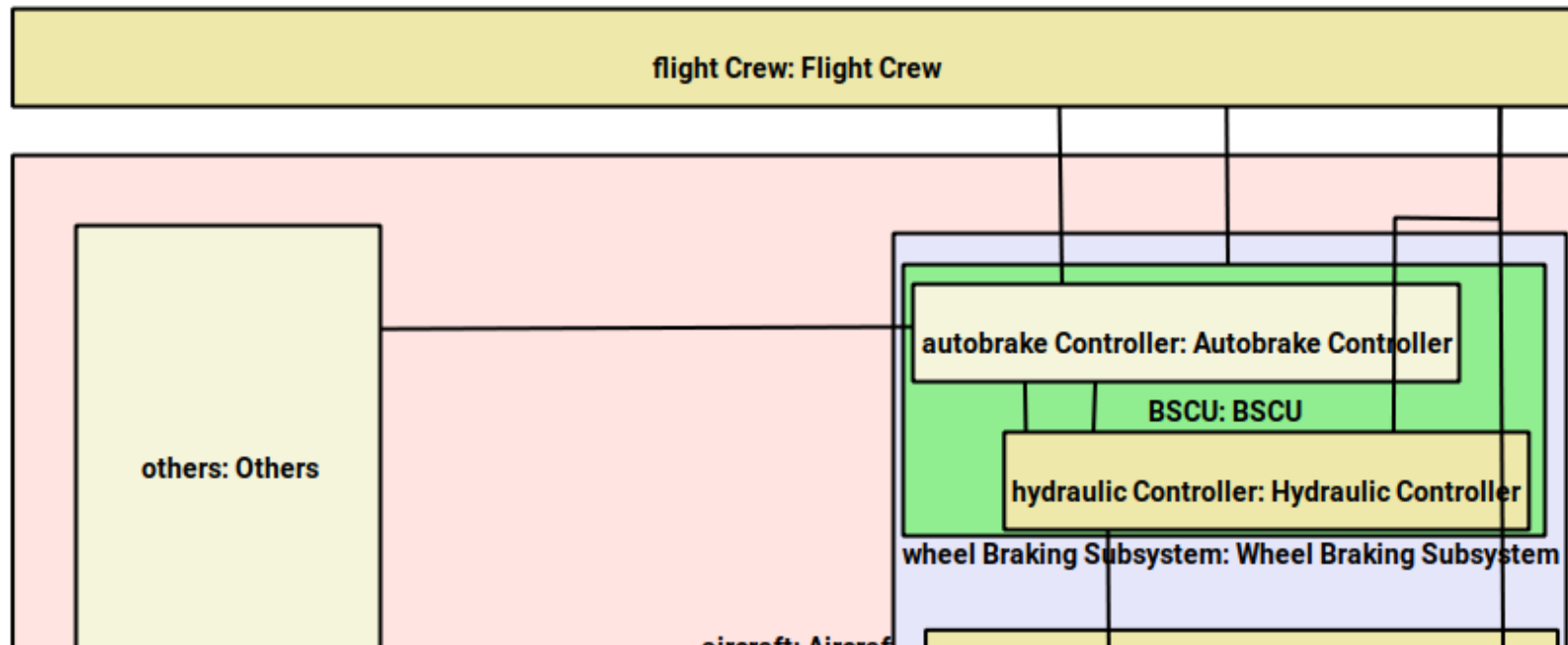
- An open source UML, SysML, and now RAAML modeling tool written in Python
- Fast and easy to use, while still having a full data model
- Improves rigor through consistency, helps add automation

**DEMO**

# Step 1: Define Purpose of the Analysis

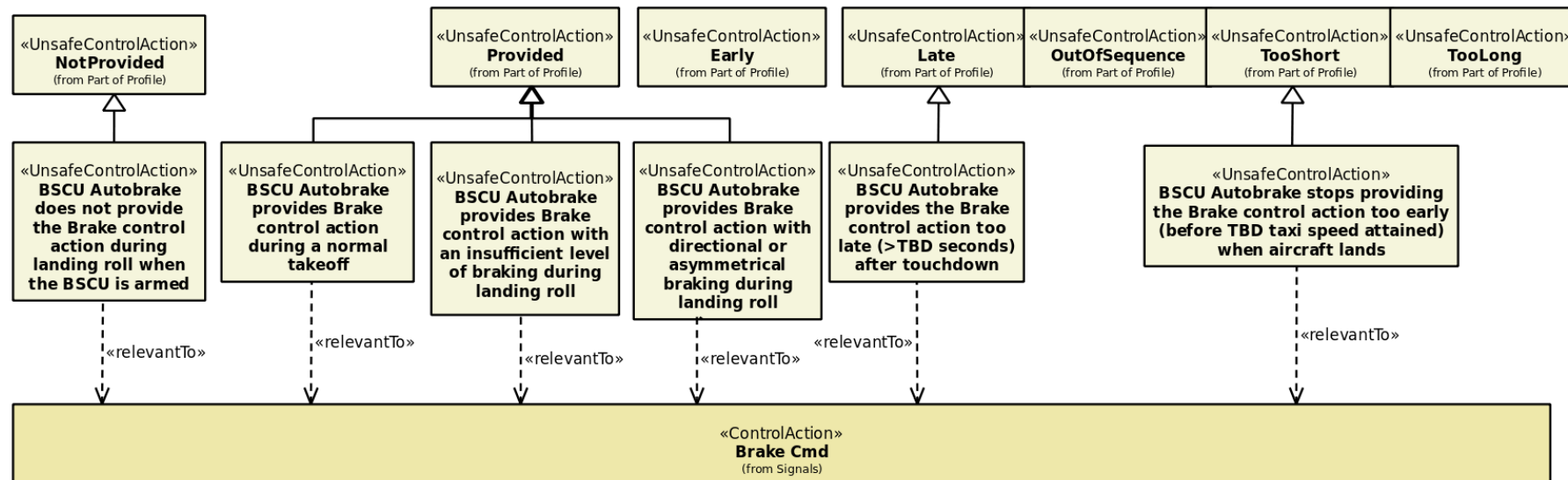


# Step 2: Model the Control Structure

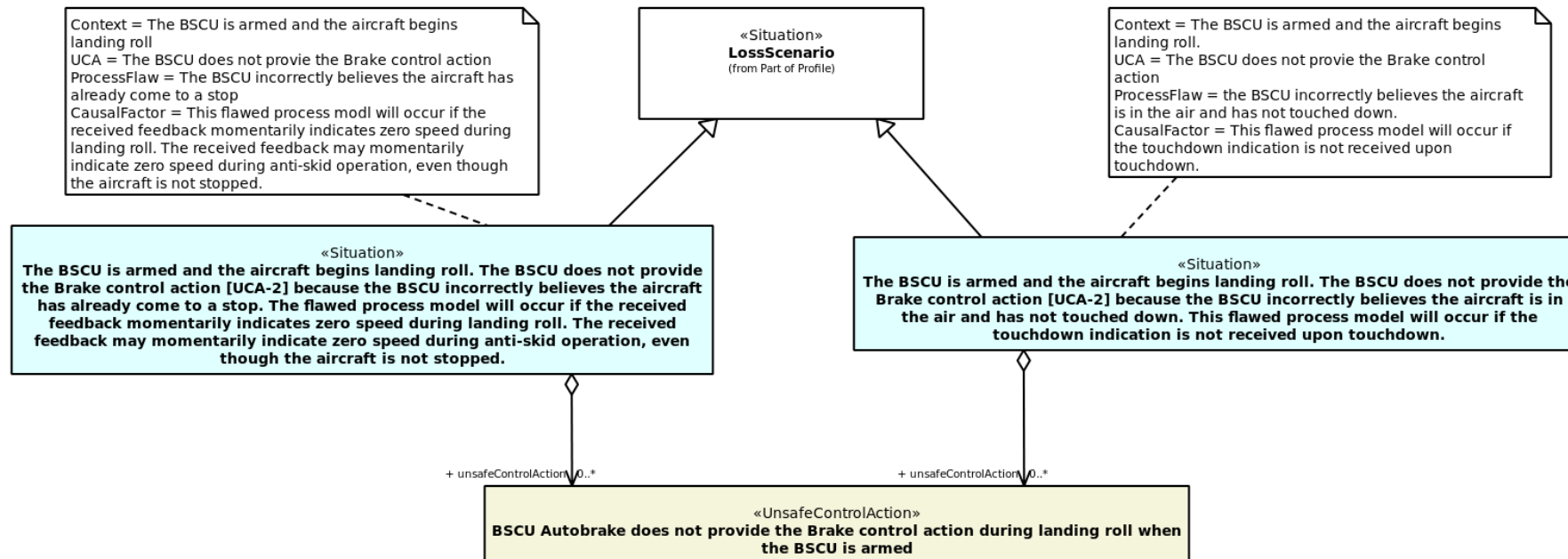




# Step 3: Identify Unsafe Control Actions



# Step 4: Identify Loss Scenarios



For more information see:

<https://omg.org/spec/RAAML>

<https://gaphor.org>