NATIONAL INSTITUTE FOR ROCKET PROPULSION SYSTEMS

NIRPS Skills & Capabilities Tool

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NIRPS Skills & Capabilities Tool

- NIRPS Portal Recap
- Skills & Capabilities Tool
- Small Team Collaboration Sites
- Community of Interest Spaces
- Development Plan
- Beta Demonstration
- Feedback & Summary

NIRPS Portal Purpose

1. The NIRPS Portal is being designed to enable collaboration on technology and system development; to foster sharing of experiences and lessons learned.
2. To streamline access to facilities & expertise across Government, industry, and academic members of the propulsion community.

NIRPS Portal Security

Security Requirement for Access:

- Use JANNAF conference & CPIAC online database model:
  - Ability to receive DoD Distribution Statement C level of information (U.S. Government and their U.S. contractors)
    - Academics, Retirees, Small Businesses without current contract may be signed for by U.S. Government civil servant
  - ITAR restriction. DLIS certification required.
  - Verified by CPIAC Security Officer

NIRPS Portal Users

Multiple Levels of User Rights:

- Administrator (resides at CPIAC)
- Partner (resides within NIRPS partner community)
  - Acts as top authority for specific communities of interest
  - Reviews & accepts posts for acceptability
  - Can elevate Participants to Moderators for their workspace
- Moderator (resides within portal user community)
  - Acts as authorities for specific communities of interest
  - Reviews & accepts posts for acceptability
- Participant (all portal users)
  - Meets security requirements, given account to portal
  - Create entries within community spaces
    - Posting of new entries is subject to approval by moderators/partners
- Public
  - Content outside of portal, no account

Skills & Capabilities Tool

- A tool for propulsion community members to identify skills & capabilities across organizational boundaries.
- Advertise skills & capabilities that reside within your organization.
- **Goal:** Increase collaboration by streamlining access to expertise.

Operation:

- Portal Participants can search by category and keyword
- NIRPS Partners to establish POCs for creating and managing entries for their organization
- Skills & Capabilities categorized by the 20 taxonomy tech areas
- Expansion into other contributors possible

Small Team Collaboration

- Spaces within the NIRPS Portal allocated to small team collaboration
- **Goals:**
  - Suitable for use by small groups working on a specific project or tasks.
  - Collaborate on projects and deliverables through file sharing, editing, and communication tools.

Operation:

- Initially setup for each of the NIRPS Teams
  - Additional small team sites can be setup as requested
- Access to team sites is controlled by a team leader
- All users can view, generate, and edit content belonging to the team

Communities of Interest

- Spaces within the NIRPS Portal allocated to collaboration on technologies, needs, and expertise.
- **Goals:**
  - Share technical information across organizations to benefit all
  - Announce / Identify areas of needed collaboration – create opportunities
  - Share lessons learned and establish community wide best practices

Operation:

- One Community of Interest for each of the 20 taxonomy tech areas.
- Each community has a Partner level authority to manage content and user rights.
- All users can view, generate, and edit content
  - Posting of new/edited content subject to review by the Partner or Moderators

NIRPS Portal Development Plan

3 main features of the NIRPS Portal:

- **Skills & Capabilities Tool**
  - Currently under development
  - Lays foundation for NIRPS Portal
  - **Beta test completed by NIRPS SFT April 17th**
  - Final functionality implemented by AIAA JPC (mid-July)
- **Small Team Collaboration Sites**
  - Build off of features implemented for Skills & Capabilities Tool
  - Implementation completed by September 2013
- **Communities of Interest Sites**
  - Final planned product of NIRPS Portal
  - Opens collaboration to broad community, managed by moderators
  - Implementation completed by December 2013
- Currently on-schedule to meet these targets

NIRPS Public Website

NIRPS

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- Home
- About NIRPS
- News
- Operational Model
- Resources
- Related Links
- Collaboration Login
- Contact Us

The National Institute for Rocket Propulsion Systems (NIRPS) will support the preservation and advancement of the nation's rocket propulsion base to ensure that it continues to serve its vital role in national security, space exploration, economic growth, and education. The Institute stewards U.S. leadership in rocket propulsion by:

- Collaborating and cooperating with the government, commercial and academic propulsion communities to most effectively use national capabilities and resources
- Monitoring public- and private-sector rocket propulsion activities
- Facilitating technical solutions for today's challenges
- Evaluating and recommending new technologies for further development
- Making available the information required by national decision-makers so that policies and other instruments of the government support the sustainment, and where appropriate, the advancement of the nation's civil, defense, and commercial propulsion capabilities.

UPCOMING EVENTS

NIRPS presentation at the JANNAF Spacecraft Propulsion Conference in Huntsville, Alabama (December 2011) More>>

NIRPS Announces Teams to address Key Propulsion Challenges After reviewing more than 40 industrial base studies and assessments, NIRPS has identified six grand challenges facing the industry. More>>

NIRPS Announcement Featured in This Week @ NASA Video interview of Dale Thomas at the JANNAF conference... More>>

NIRPS Collaboration portal The location to access and interact with Government, industry and academic members of the United States Propulsion Community

NIRPS Portal Access

Responsible Official: W. Brown

NIRPS Portal Landing

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Search NIRPS Portal | search

Secure Portal System

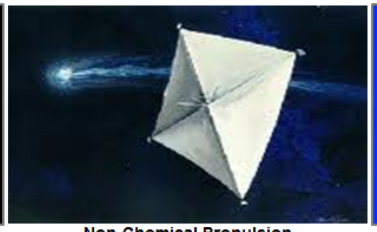
- Portal Home
- NIRPS Leadership
- Skills & Capabilities Tool
- Communities of Interest

WELCOME TO THE NIRPS COLLABORATIVE PORTAL

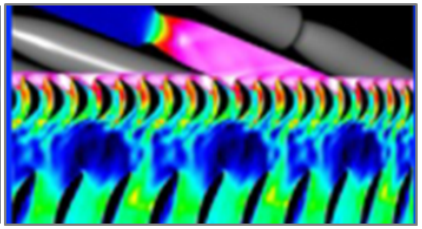
The NIRPS Collaborative Portal is a secure website that exists to foster a vibrant rocket propulsion community. Users are encouraged to join in sharing their knowledge of reliable, affordable, and emerging propulsion systems, components, and associated technologies in support of the nation's defense, civil, and commercial needs.

Communities of Interest:

Chemical Propulsion



Non-Chemical Propulsion



Common Supporting Technologies

Small Team Collaboration Space

Responsible Official: W. Brown

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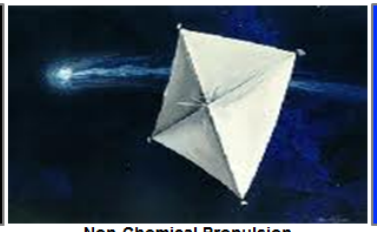
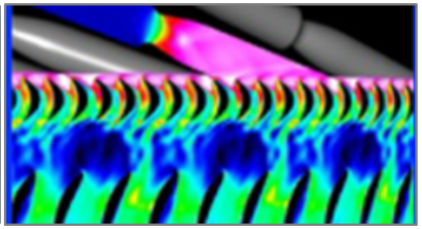


Non-Chemical Propulsion



Common Supporting Technologies

Skills & Capabilities Tool

Responsible Official: W. Brown

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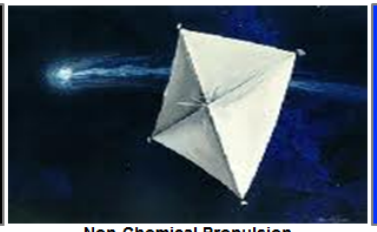

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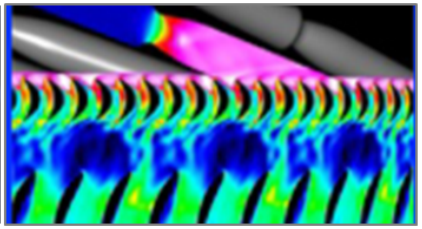

Common Supporting Technologies

Responsible Official: W. Brown

Top-level Community of Interest Navigation

NIRPS Skills & Capabilities Tool

Skills & Capabilities Tool Demo

http://www.cpiac.jhu.edu/nirps

Skills & Capabilities Demo Feedback

- The NIRPS SFT tested the Skills & Capabilities Tool beta April 10-17th
- Comments from the testers:
  - User interface intuitive
  - Includes relevant filtering and search mechanisms
  - Minor modifications requested
- Additional functionality current under development
  - User registration & account management
  - User access control
    - Moderator to allow specific users to add content to tool

Summary

- The NIRPS SFT and CPIAC are developing the NIRPS Portal
- **Initial release of NIRPS Portal to community in July**
  - Skills & Capabilities Tool is first product
- Additional functionality released
  - September 2013 – Small Team Collaboration Sites
  - December 2013 – Communities of Interest Sites
- Beta release set for April 2013
- Final release set for December 2013
- Currently on-schedule to meet these targets

Thank you.

Questions?

Contact:

Nick Keim

nkeim@cpiac.jhu.edu

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Backup Slides

NIRPS Portal Requirements

1. Security
    1. Individual user accounts verified by CPIAC
    2. Access based upon JANNAF attendance & CPIAC online database requirements
    3. Multiple levels of user rights
2. Accessible through NIRPS website
3. Method of allowing users to identify skills & capabilities currently existing within the propulsion community
    1. Self identification of organizational skills & capabilities
    2. Users can search & filter by category & keyword
4. Areas for collaboration
    1. Organized into distinct communities
    2. Capture information including: Activities, Needs, Opportunities, Technologies, Experiences, Lessons Learned, and Best Practices
    3. Users can search & filter by category & keyword

NIRPS Communities of Interest

Communities of Interest

Collaborative Spaces

NIRPS Communities of Interest

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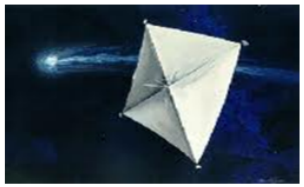
Secure Portal System

- Portal Home
- NIRPS Leadership
- Skills & Capabilities Tool
- Communities of Interest
  - Chemical Propulsion
  - Non-Chemical Propulsion
  - Common Technologies

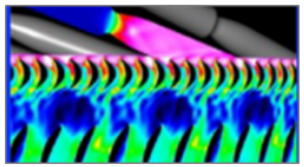
COMMUNITIES OF INTEREST

This space exists for propulsion community members to share their knowledge in the areas of propulsion systems and supporting technologies, including on-going activities, needs, opportunities, experiences, lessons learned, and best practices.

Chemical Propulsion



Non-Chemical Propulsion



Common Supporting Technologies

Top-level Community navigation

NIRPS Communities of Interest

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Search NIRPS Portal | search

Secure Portal System

- Portal Home
- NIRPS Leadership
- Skills & Capabilities Tool
- Communities of Interest
  - Chemical Propulsion
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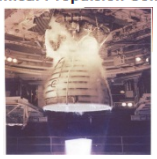
COMMUNITIES OF INTEREST: CHEMICAL PROPULSION

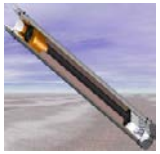
This space exists for propulsion community members to share their knowledge in the areas of propulsion systems and supporting technologies, including on-going activities, needs, opportunities, experiences, lessons learned, and best practices.

Chemical Propulsion Communities of Interest:



Liquid
Monopropellant, Bi-Propellant, Pressure Fed, Pump Fed, Cryogenic, Storable, Systems, Propellants, Components.

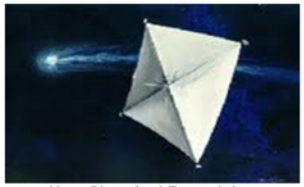
Solid
Technologies of interest to the solid propulsion community of interest include...



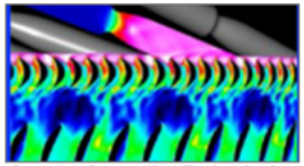
Hybrid
Technologies of interest to the hybrid propulsion community of interest include...

Gel
Technologies of interest to the gel propulsion community of interest include...

Airbreathing
Technologies of interest to the gel propulsion community of interest include...



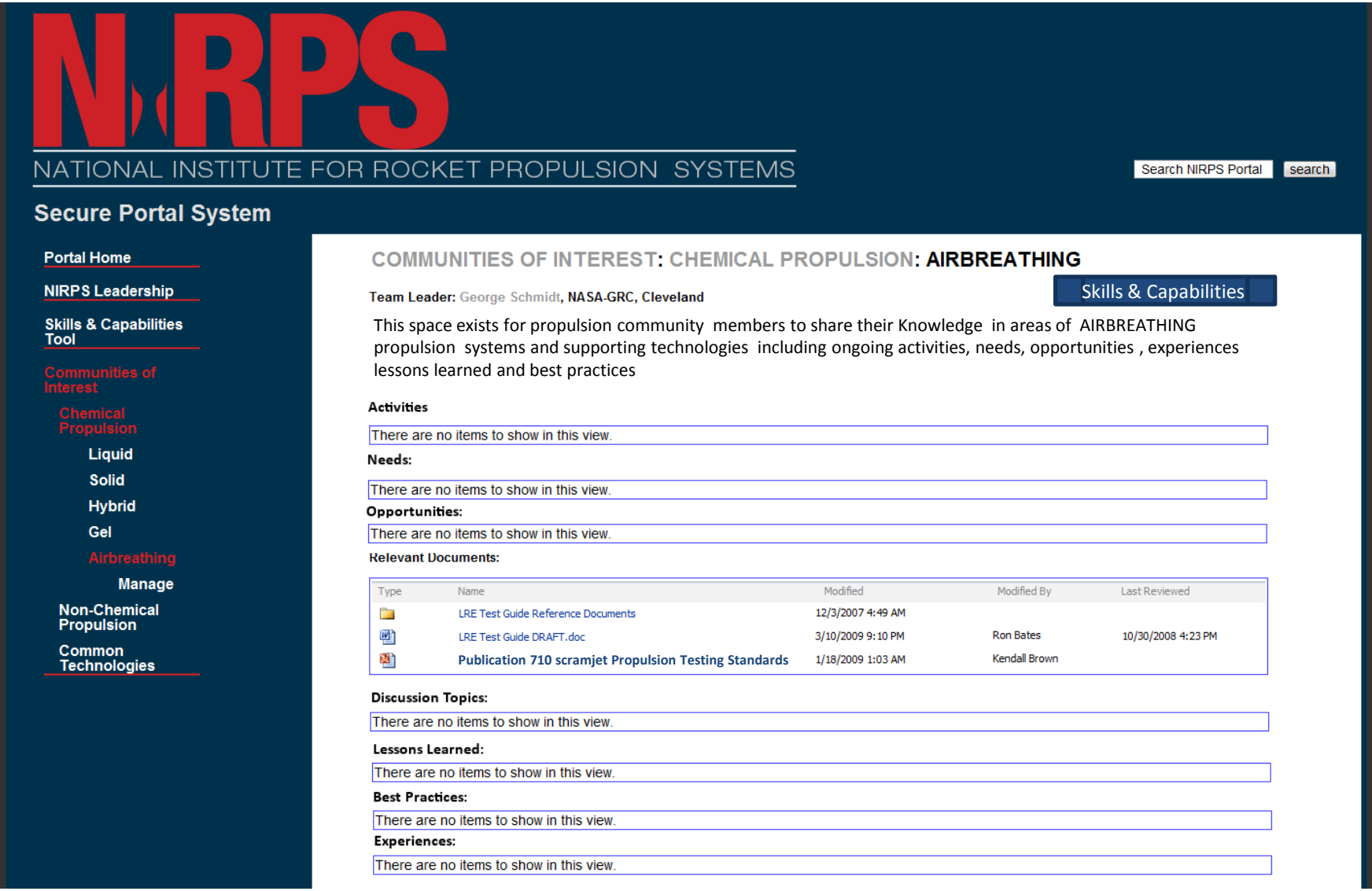
Non-Chemical Propulsion



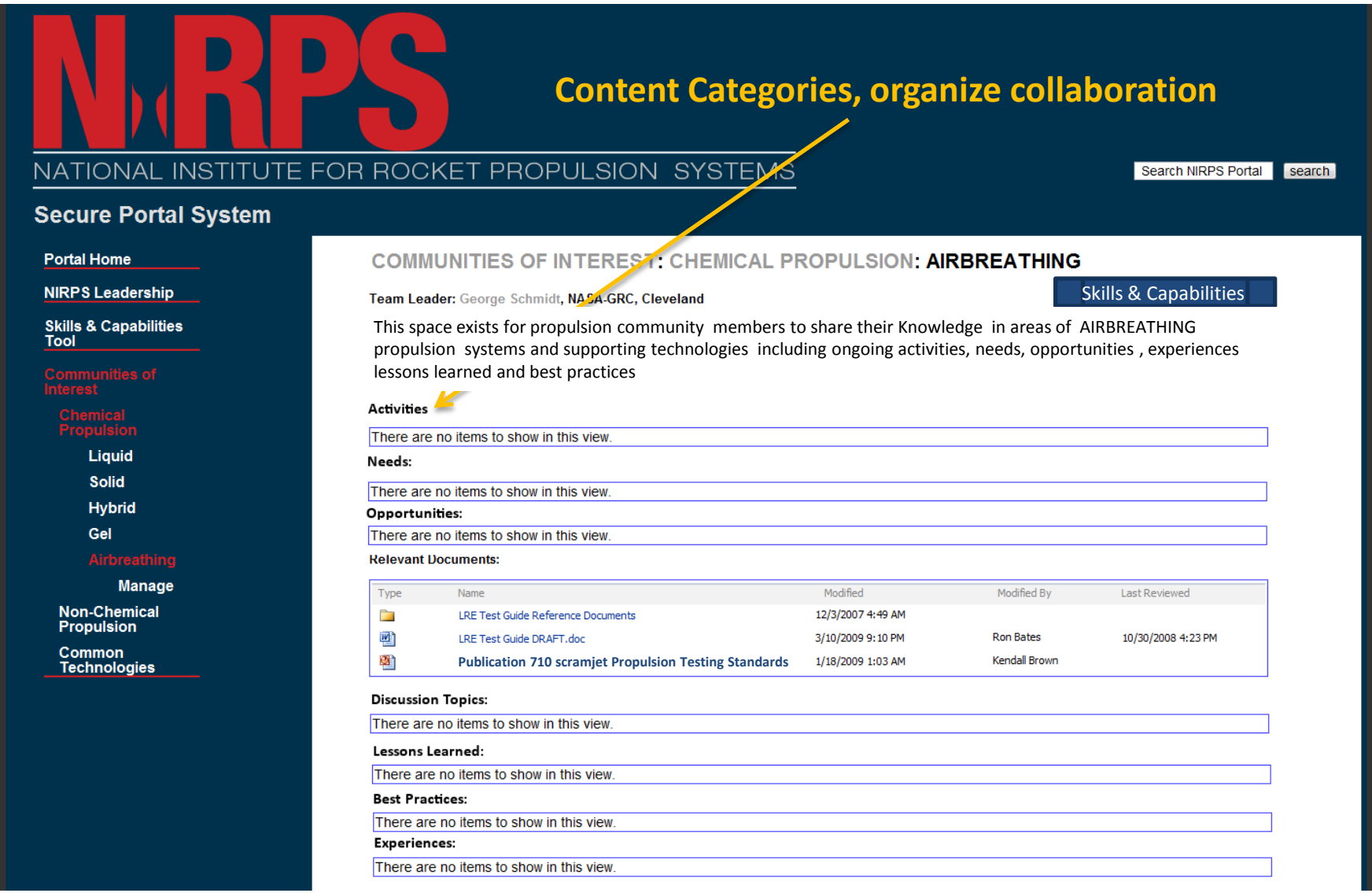
Common Supporting Technologies

Click on a specific Community to Collaborate…

NIRPS Communities of Interest



NIRPS Communities of Interest

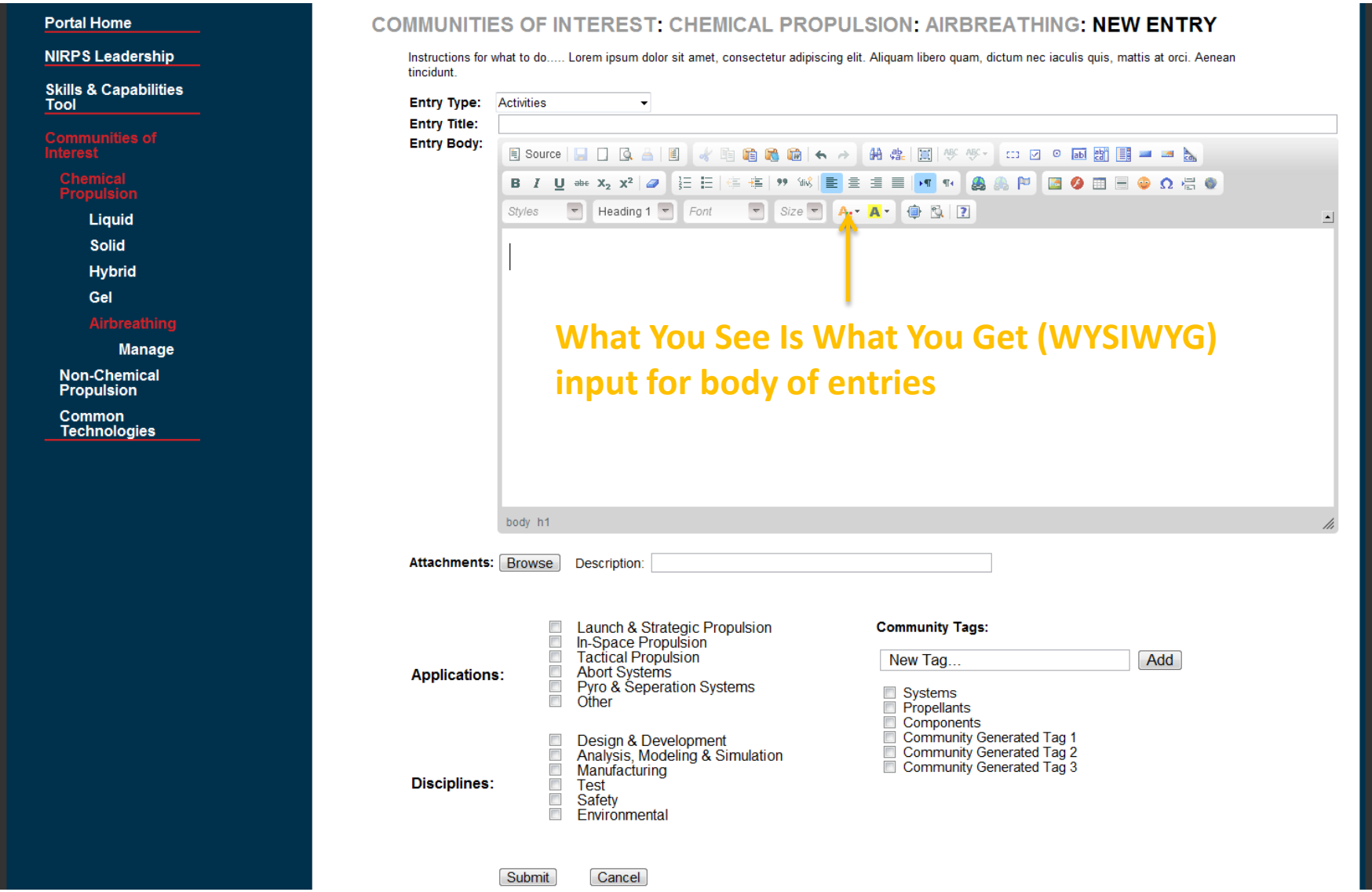


NIRPS Communities of Interest

Organize entries by community members based on:

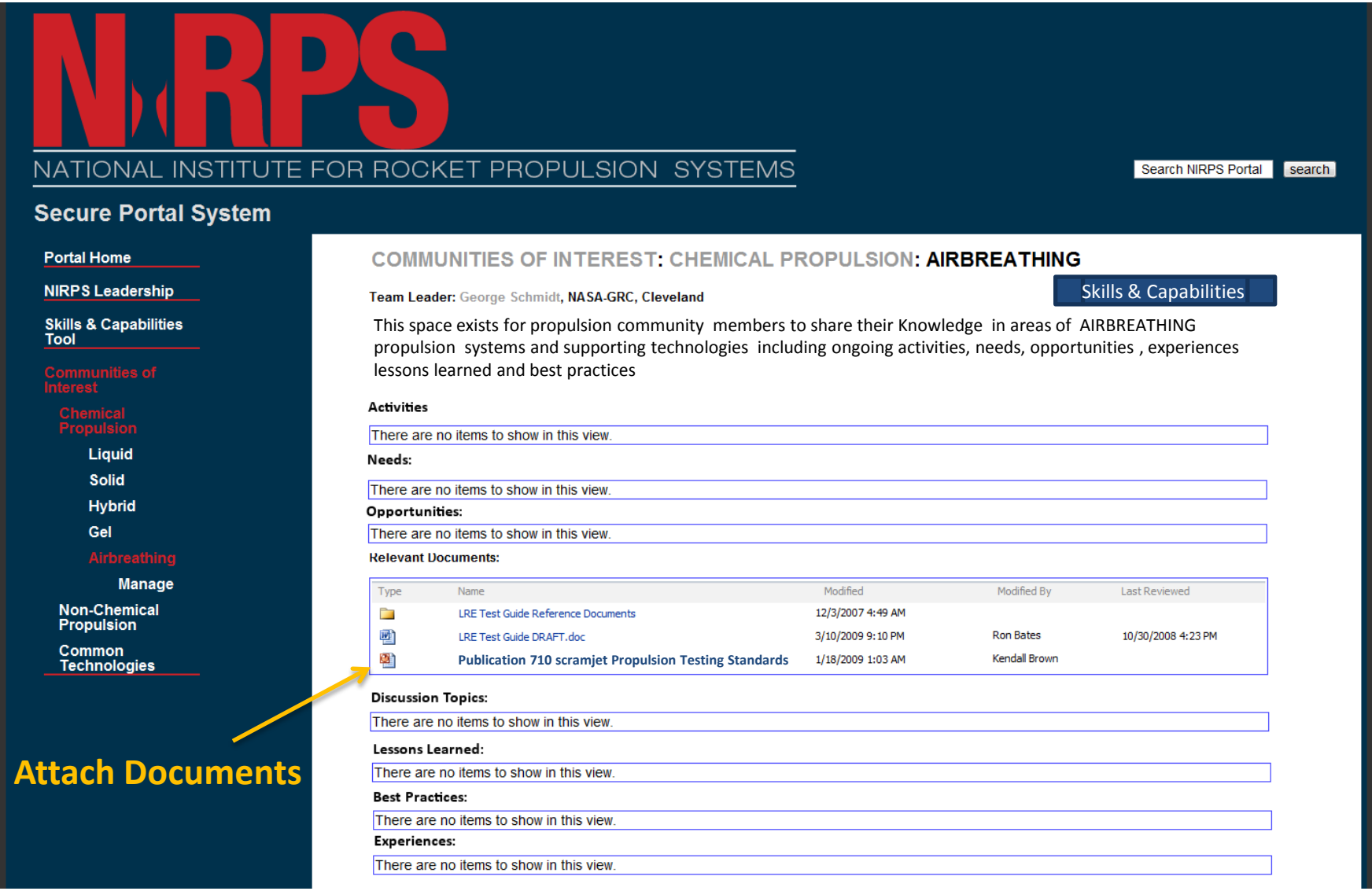
- Activities
- Technologies
- Needs
- Opportunities
- Experiences (Whitepapers)
- Lessons Learned
- Best Practices

New Entry - Communities of Interest



Notional approach for capturing community content

NIRPS Communities of Interest



An Entry - Communities of Interest

Portal Home
NIRPS Leadership
Skills & Capabilities Tool
Communities of Interest
Chemical Propulsion
Liquid
Solid
Hybrid
Gel
Airbreathing
Manage
Non-Chemical Propulsion
Common Technologies

COMMUNITIES OF INTEREST: CHEMICAL PROPULSION: AIRBREATHING: PUBLICATION 710 - SCRAMJET PROPULSION TESTING STANDARDS, RECOMMENDED PRACTICES, AND GUIDELINES (PUB-710)

Go Back to Community Main Page

Publication 710 - Scramjet Propulsion Testing Standards, Recommended Practices, and Guidelines (PUB-710)

Edit this entry

Last Updated: 9/6/2012 by Jeffery Pearce
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CPIAC Publication 710 ("PUB-710") is intended to systematically address current methods for testing scramjet engines and identify the industry consensus on recommended practices and new standards. The discussions cover: scramjet engine classifications and descriptions; analytic approaches; descriptive overviews of available and potential test facilities; test configurations and procedures at both the major subsystem and integrated engine levels; and a comprehensive approach to the timely production of test reports. The use of appropriate analytic methods for pre-test prediction and posttest data reduction and evaluation is recommended, as is the use of appropriate and sufficient instrumentation.

This handbook was prepared by the Scramjet Engine Test Standard Working Group (SETSWG) under the direction of the JANNAF Airbreathing Propulsion Subcommittee, Engine Testing and Validation Panel. It was produced through the efforts of many practitioners in the greater scramjet community. The long-term goal of this effort is to establish a more systematic and uniform set of standards for the test and evaluation of scramjet engines in the development process. It is intended to be a living document that will provide recommended practices for testing in the near term that will evolve into a full set of standards in subsequent editions.

Pub 710 is an evolving document, which by necessity will remain a mixture of guidelines, recommended practices, and standards for quite some time. The reality is that many standards remain beyond our reach at this time due to the absence of documented testing practices and guidelines, from which standards can be developed by consensus among the testing community. The SETSWG is organized to support the ongoing process of maturing testing guidelines into recommended practices and subsequently into standards. The process encourages representation by all US agencies, facilities or laboratories engaged in testing scramjet engines. Individuals interested in participating in future ongoing work of the SETSWG, to include establishing future scramjet test standards, are encouraged to contact the SETSWG Secretary, Mr. Jeff Pearce (jeffrey.pearce@wpafb.af.mil), or JANNAF Airbreathing Propulsion Subcommittee Technical representative

Attachments:

Volume 1 - Executive Summary	12/3/2005	by Ronald Fry	Checkout for Editing	Previous Versions
Volume 2 - Scramjet Propulsion Testing Standards, Practices, and Guidelines	12/3/2005	by Jeffery Pearce	Checkout for Editing	Previous Versions
Addendum Oct 2007 -10.2 Condensation Detection Standard	10/20/2007	by Jeffery Pearce	Checkout for Editing	Previous Versions
Addendum Oct 2008 - 12.1 Scope of Test Report Standard	10/7/2008	by Jeffery Pearce	Checkout for Editing	Previous Versions

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