





American Astronomical Society





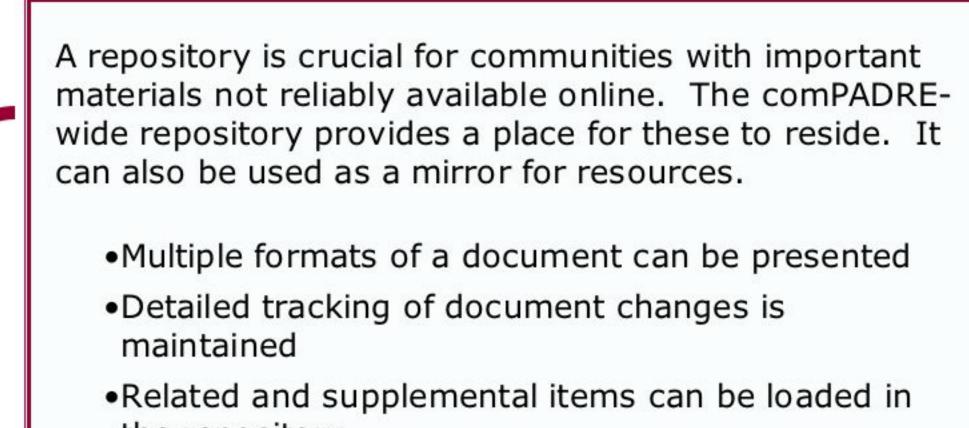
Features for Managing Diverse Collections and User Communities:

Company is a network of digital collections of online resources for physics and astronomy education. Current collections include: High School Physics Teachers, Undergraduate Physics and Astronomy Students, General-Education Undergraduate Astronomy Instructors, Undergraduate and Graduate Quantum Physics Teachers, and Physics Education Researchers. Meeting the needs of these diverse communities requires an understanding of their core needs, flexible tools, and extensible technical architecture.

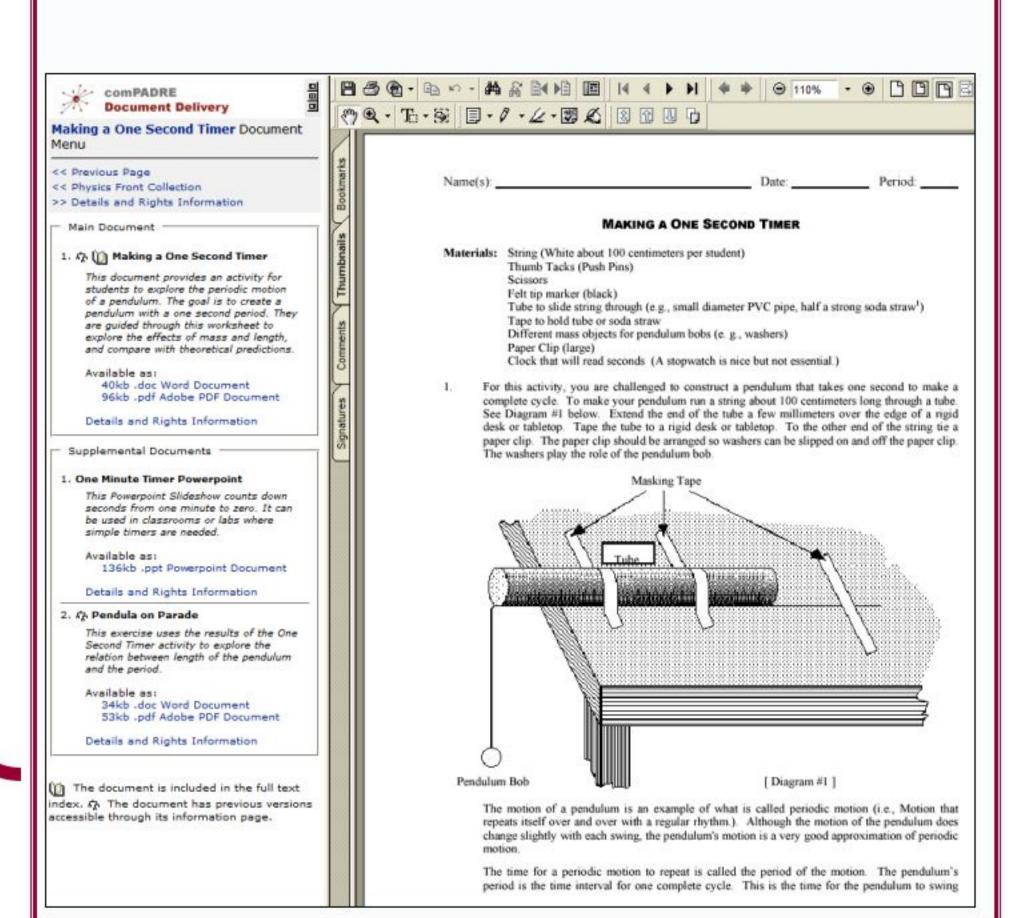
Item Management:

Item Management includes processes for adding items to the database, and tools for collections to add collection-specific details

- Submission Any registered user can submit items for consideration
- Filtering All submissions are viewed by a librarian for approval and routing to collections
- Tagging Students add item-level metadata
- Approvals Librarian approves metadata, collection editors add information and accept item for collection
- Link Checking Item database is checked for broken links and size changes in items
- Cloning Database items can be cloned to streamline addition of related materials
- Repository
- Features Each collection can highlight items for their community for front-page display
- Annotations Community-specific additional information or help for using resources
- Relations Resources that can be used together can be connected in the item display



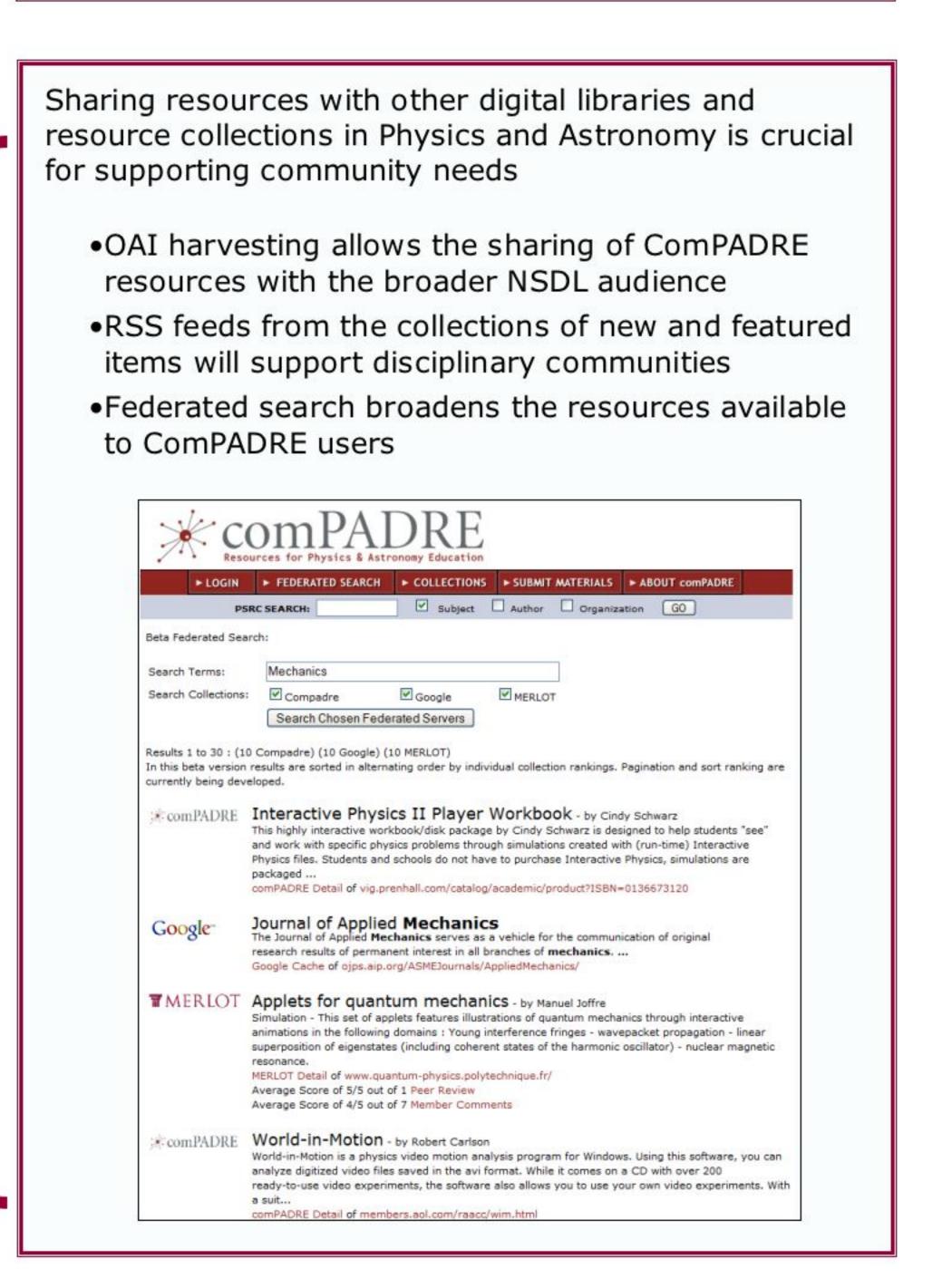
- Navigation to supplemental items and connections to the database record are immediately available
- Full-text search of repository items is available if desired

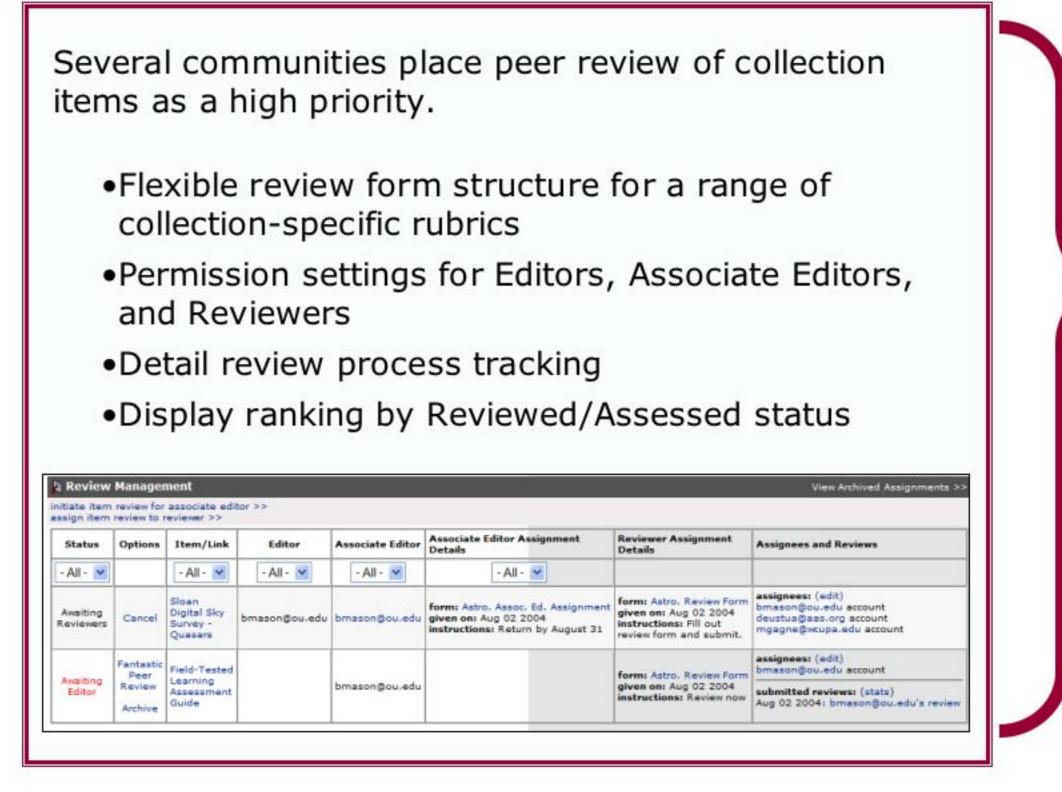


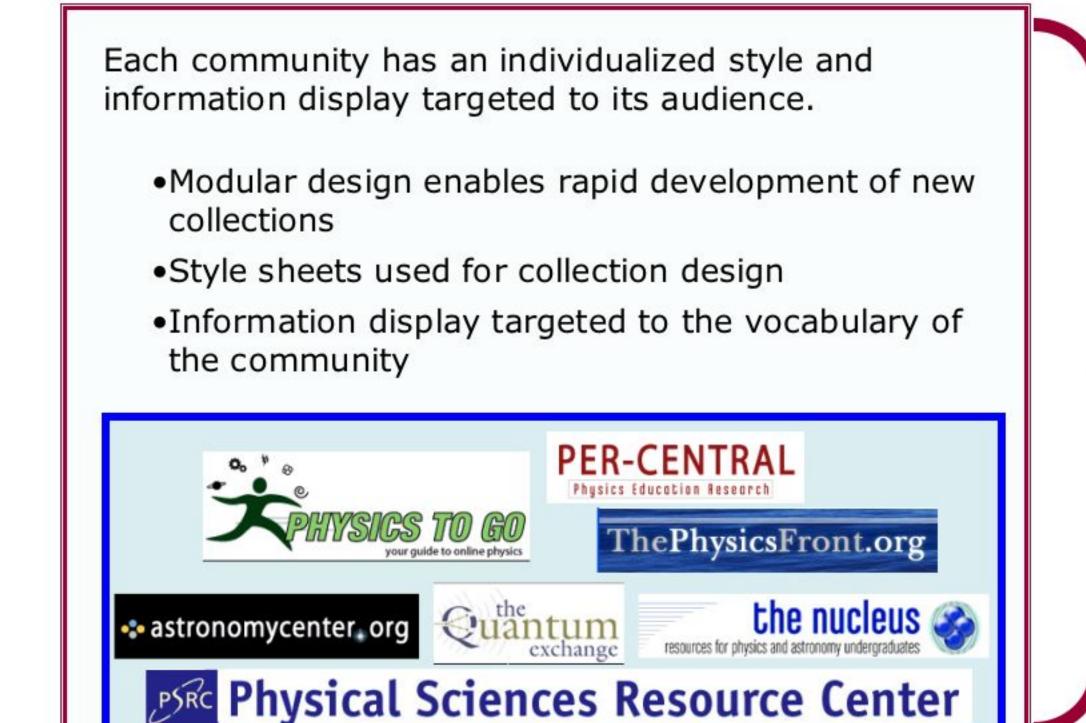
Infrastructure:

The ComPADRE technical infrastructure is built for rapid development of collections, reliability of service, and standards-based services

- 3-Tier Development Independent development, staging, and production servers are used with controlled rollout (applications) and rollback (data)
- Data/Web Segregation Separate data and web servers allow for data integrity and display response
- Dynamic Data Services All services are provided by calls to the database
- Disaster Recovery Data back-up and recovery and disaster recovery plans are in place
- •Inter-Library Collaboration
- Metadata Standards ComPADRE uses an IMS/IEEE-LOM based data structure with DC, NSDL-DC, OAI-DC crosswalks for harvesting
- Defined Vocabularies Defined standard vocabularies, such as GEM are used where possible.
- An existing Physics and Astronomy Education vocabulary has been adopted for subjects
- Mapping and aggregation of vocabularies are used for communities with different terminology







Registered users can bookmark resources for their

automatically from the metadata

Comments can personalize the entries

AIP Style Guide Cite

yslet's bookmarks follow below.

ne bookmark has been successfully edited.

Resource citations in different formats are created

Entries can be moved or copied between folders

Public folders can be used for resource sharing and

M. Belloni, L. Cain, (2002), WWW Document,

Packages the results for download and local use.

(http://pen.physik.uni-kl.de/cgi-bin/ps/search.pl).

Website: http://webphysics.davidson.edu/Applets/Applets.html

(http://webphysics.davidson.edu/Applets/Applets.html).

Comments: Web home for the Physlets project. Documentation and

resources for physlet users, with some emphasis on those creating their own

F. Schweickert, (2002), WWW Document,

scripts. Research papers are also available.

W. Christian, WWW Document,

Physlets Home (edit | delete)

AIP Citation

(http://webphysics.davidson.edu/gmbook/default.html).

Comments: WWW-wide search for physlet-based curricular materials.

Website: http://pen.physik.uni-kl.de/cgi-bin/ps/search.pl

Also, ComPADRE is beta testing Citation Styles! The citation styles are not yet complete and

Comments: A wide range of exercises for pre-class work, Based on JITT, Wil

Move Selected to Folder:

personal use

and users

mentoring

Browse Resource Ty

Submit Materials

Help us improve the

PSRC by completing a

Administrate

Teacher Communities

Collection Management:

Collection Management tools include general features for community management and tools for specific community

Peer Review

- Logging Detailed traffic and page view logging aids in usability testing and outreach efforts
- Surveys & Polls One question polls and longer surveys are used to attract traffic and collect feedback
- Groups Tool and feature permissions are maintained with a granular, object-oriented interface
- Collection Metadata Primaries Collection-specific metadata primary values focuses
- Customized Tools Communities have special needs specific to their interests. These are accommodated through customized tools built to connect to the general ComPADRE-wide infrastructure.
- Student Research Opportunities Database
- •K-12 National Educational Standards
- Guest Reviewers and Columnists
- Teacher Mentoring
- Private Messaging System & Chat
- Discussion forum moderation
- Bibliographic citations
- Individualized collection design

User Features:

User features are designed for information discovery, storage, retrieval, and community discourse.

- User Submissions Users submit materials for personal and community use
- Search/Browse Interface tailored to the community, with Subject, Resource Type, Grade Level, and User Type emphasized

• Filing Cabinet

- Moderated Discussions Discussion tools are used for general discussion, focused topics, and mentoring
- Private Messaging and Chat Private or real-time communications needed for mentoring and community activities
- User Comments Resource-specific comments from registered users
- User Reviews Detailed user-submitted resource reviews, solicited or contributed
- Profile/Preferences Personalization of the collection experience and community communications



Part of the National Science Digital Library

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