

NASPI Synchrophasor Software Exchange

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NASPI Work Group Meeting
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Meet the NASPI Synchrophasor Software Exchange

Purpose – share software that can be used for synchrophasor system management and data analysis at no cost to the user.

Sources – anything you and your colleagues want to contribute

Why – sharing useful software will accelerate the availability and use of high-quality, high-value synchrophasor software tools

Types of software we want:

- Data analytics, including event analysis
- PMU installation and commissioning
- PDC code
- Network management
- Data cleaning and management
- Whatever you find useful

Warnings

Contributors

- You must own the IP for your software.
- You must post software and documentation on a third-party software hosting site.

Users – use this software at your own risk!

- Please respect others' IP
- DOE, PNNL & NASPI do not guarantee and are not responsible for the quality, safety or usability of the software.

https://www.naspi.org/synchrophasor software

The screenshot shows a web browser window with the URL <https://www.naspi.org/synchrophasorsoftware>. The page title is "NASPI | Synchrophasor Software". The browser's address bar and navigation icons are visible at the top. Below the browser window, the website content is displayed. The header includes the NASPI logo and the text "North American SynchroPhasor Initiative". A navigation menu on the left lists various sections, with "Synchrophasor Software" expanded to show "Overview" as the active page. The main content area features a "NASPI Software Exchange" section with the following text:

NASPI Software Exchange

The purpose of the NASPI Synchrophasor Software Exchange is to share software that can be used for synchrophasor system management and data analysis at no cost to the user. Members of the NASPI community have developed software in many forms and formats, that touch synchrophasor technology in many ways - data analytics, PMU commissioning, PDC code, network management, data availability monitoring, cyber-security, and more.

NASPI's mission is to foster the adoption and value of synchrophasor technology through joint problem-solving and information sharing. Through this software exchange, NASPI members are advancing that mission by sharing software, to accelerate the availability and use of high-quality, high-value synchrophasor software tools.

All of the software hosted here is provided at no cost to the user. But the user is warned that NASPI and the software providers do not guarantee the quality or performance of any piece of software in the exchange; that the software hosted may not come with extensive documentation or user support; and that software use or re-use may come with contributor-specified limits and restrictions.

To create a new software exchange entry, please login below.

If login or account assistance is needed please contact [Teresa Carlon](#).

Below the text are two buttons: "Create NASPI Account or Login" and "Search Synchrophasor Software".

The footer contains the following information:

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Logos for Pacific Northwest National Laboratory and EPRI (Electric Power Research Institute) are also present in the footer.

Software contributor information

NASPI | Synchrophasor Software Overview - Mozilla Firefox
https://www.naspi.org/site/Module/SoftwareExchange/Forms/Detail.aspx?m_ID=SOFTWARE_EXCHANGE&softwareexchangeid=1

Production Welcome!

Synchrophasor Software Overview




Dynamic System Identification Toolbox

Synchrophasor Software Detail

Title	Dynamic System Identification Toolbox
Description	MATLAB-based Dynamic System Identification Toolbox (DSI Toolbox), including the BPA/PNNL Prony Ringdown GUI
Contributor	ftuffner
Contributor Email	francis.tuffner@pnnl.gov
Categories	Oscillation detection Transient stability
Purposes	Off-Line Analytics (including all types of "modeling")
Type	Local Application
Platforms	64-bit Windows 32-bit Windows
Languages	MATLAB
Keywords	disturbance analysis mode meter small signal stability oscillation analysis modal analysis
License Type	Client-Server Application
License Comments	Open Source BSD 2-clause license
First Use Date	8/1/2008
Software URL	https://github.com/ftuffner/DSIToolbox
Documentation Available	<input type="checkbox"/>

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Software list & filter/search options

The screenshot displays the NASPI North American SynchroPhasor Initiative website. The main content area is titled "SynchroPhasor Software Search" and shows a list of software entries. The search interface includes a "Search Filters" panel on the right with a list of filterable keywords and a "Category" filter. The left sidebar contains navigation links for various site sections.

Production Welcome!

NASPI North American SynchroPhasor Initiative

SynchroPhasor Software Search

Entries

No Filters Selected Clear Filters

2 of 2 entries Order By **Date**

Dynamic System Identification Toolbox
<https://github.com/ftuffner/DSIToolbox>

Contributor **ftuffner** Type **Local Application** Platform **64-bit Windows, 32-bit Windows**
Created Date **03/22/2015**

MATLAB-based Dynamic System Identification Toolbox (DSI Toolbox), including the BPA/PNNL Prony Ringdown GUI

open Phasor Data Concentrator - openPDC
<https://www.gridprotectionalliance.org/products.asp#PDC>

Contributor **Russell Robertson** Type **Other** Platform **OSX, 64-bit Linux, 32-bit Linux, 64-bit Windows**
Created Date **03/23/2015**

The openPDC is a high-performance data concentrator platform for the management of streaming synchroPhasor and other time-series data in real-time. The openPDC is a suite of applications and services that assure highest-availability phasor data collection and distribution from the smallest of implementations, such as aggregating data from 2 PMUs at a substation -- to the very large, such as management of synchroPhasor data for a U.S. interconnection. The openPDC has been in production use since 2004. It has a proven performance record and it continues to be on a steep improvement curve.

Search Filters

Apply Filters

Find

Keywords select all | none

- angle monitoring
- congestion management
- cyber-security
- data cleaning
- disturbance analysis
- dynamic line rating
- fault location
- frequency monitoring
- modal analysis
- mode meter
- model validation
- oscillation analysis
- pattern recognition
- PMU software
- small signal stability
- state estimation
- visualization and situational awareness
- voltage monitoring
- wide area measurement systems

Category select all | none

Navigation: Home, Reference Documents, Work Group Meetings, Task Teams (Overview, Control Room Solutions, Data & Network Management, Engineering Analysis, Performance Requirements, Standards & Verification), Technical Workshops and Tutorials, Site Search, Event Calendar, Staying Informed, SynchroPhasor Software (Overview, **All Software**, Contribute SynchroPhasor Software), Training, Related Sites, Archive.

Thank You!

PNNL staff

- Cara Engeman
- Teresa Carlon
- Eric Andersen

Idea generators

- Kyle Thomas
- Kevin Jones
- Russell Robertson

Early testers

- Russell Robertson
- Ritchie Carroll
- Anurag Srinivasta
- Kevin Jones
- Kyle Thomas

Early contributors

Your job now

Please share your good software!

Please use others' good software and let them know it's good.

Please take good software and make it better.



Now – elevator pitches

- Ritchie Carroll (GPA) – Project Alpha
- Anurag Srivasta & HyoJong Lee (Clemson) – PMU Animation Software
- Kevin Jones (Dominion) – Synchrophasor Analytics
- Pavel Etingov (PNNL) – Frequency Response Analytics Tool