USER OFFICE COMMON BUSINESS SOFTWARE WORKING GROUP

APRIL 23, 2018

SUSAN WHITE-DE PACE ON BEHALF OF THE WORKING GROUP
APS USER PROGRAM MANAGER

OUTLINE

Motivation

1. BES User Facilities
2. Benefits of Improvements
3. Looking at Competition

Working Group

Examples of Working Group Outcomes

- Review of Software, Hardware and Applications
- Benchmarking User Registration Fields
- Observations
- Observations : ORCiD

Proposed Next Steps

Summary

MOTIVATION 1: BES USER FACILITIES

BES-funded User Facilities: Provide access to world-leading X-ray science tools to domestic and foreign investigators based on the scientific merit of their proposed research

Metric	To understand …
Proposals submitted	User demand
Operating hours	Reliability and effectiveness
Oversubscription ratio	Guiding strategic decisions for improvement
Publications	Scientific output
Impact factors	Scientific impact
Statistics	Details of User communities

User Offices: Provide a seamless user experience, so that investigators can conduct their research at our facilities in a safe manner, while complying with all rules and regulations

User Registration	Onboarding	Post Experiment	Compliance
Proposal:	Safety Reviews	Publications	Safety Regulations
Submission	Safety Training	Satisfaction Survey	Lab Requirements
Review		Facility Statistics	DOE Regulations
Scheduling			DOE Reporting

MOTIVATION 2: BENEFITS OF IMPROVEMENTS

Improving user experience across all BES X-ray User Facilities

- Streamline processes
- Sharing information
- Remove repetition and non-value added tasks

Users' Benefit	Facilities Benefit	BES Benefits
Streamlined communication	Standardizing on best practices	Coordinate vision for BES user facilities
Common registration	Common vision for user access	Improved statistics across all user facilities
Common proposal template	Long-term cost effectiveness	Cross-facility data
Common scheduling tools		Cost effectiveness
Shared training		
Publication portal		

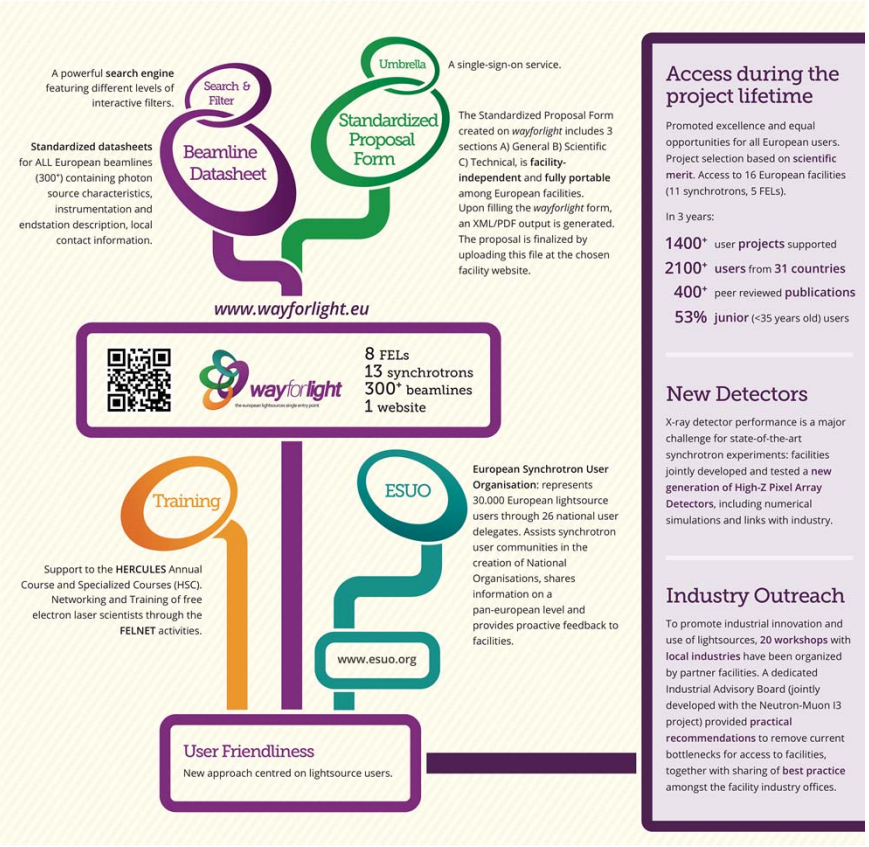
MOTIVATION 3: LOOKING AT THE COMPETITION

European User Facilities have already started!

calipso wayforlight

Coordinated Access to Lightsources to Promote Standards and Optimization

WAY FOR LIGHT



LEAPS League of European Accelerator-based Photon Sources

Argonne NATIONAL LABORATORY

WORKING GROUP

	ALS	APS	LCLS	NSLS II	SSRL
User Program Manager	**S. Bailey**	**S. White De Pace**	**L. Conradson**	**L. Miller**	**C. Knotts**
Additional Oversight & Input	S.Kevan	A.Ramanathan, C.Vanni, D.Mills	P.Jones, A.Robert	S.Cambell, G.Cisco	L. Dunn, B.Hedman

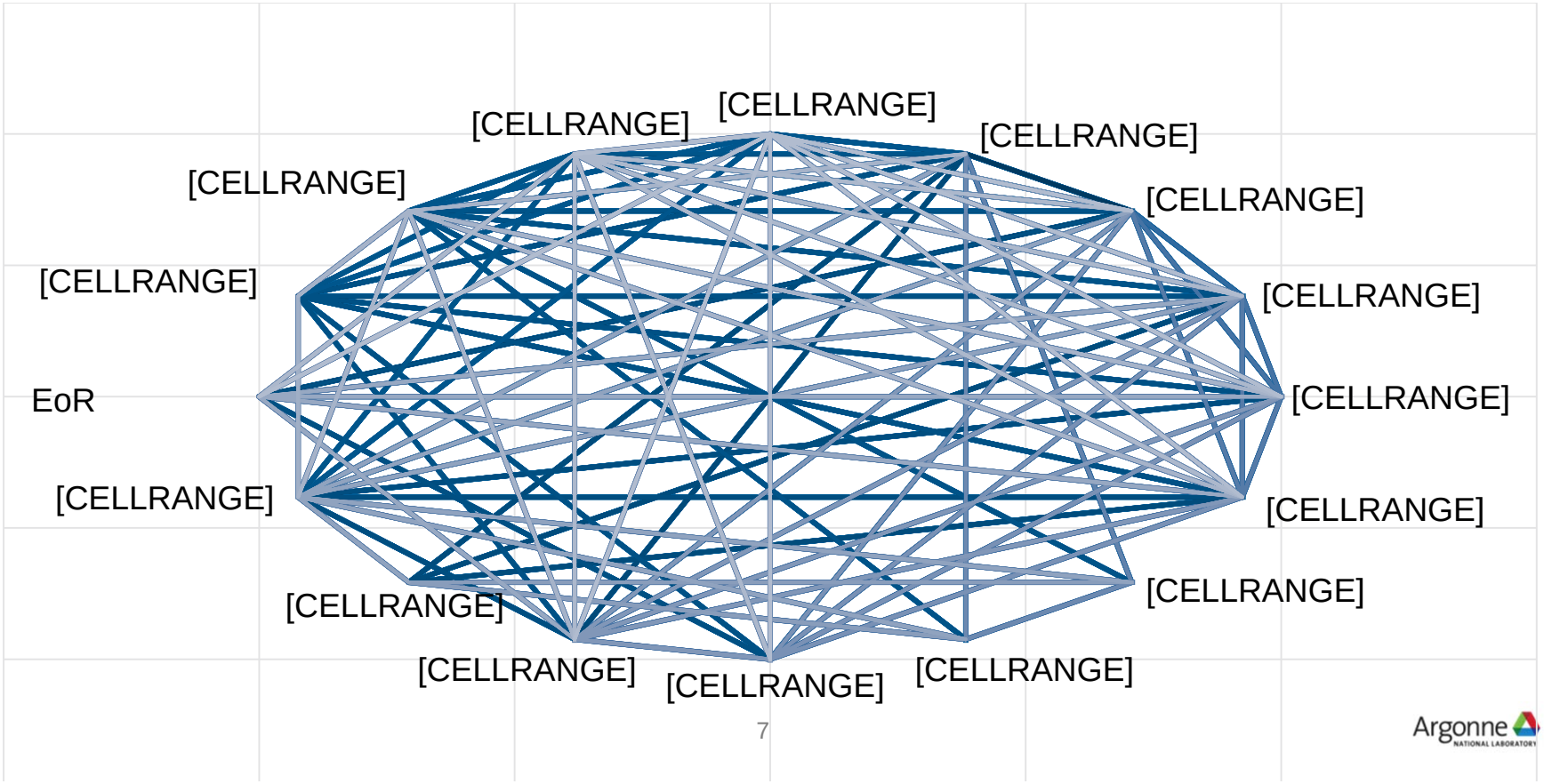
- Four teleconferences between 11/2017- 03/2018:
  - Reaching common goals:
    - Driven by improving user experience
    - Drive for better tools
  - Conducted benchmarking on:
    - Data collection
    - Laboratory use of ORCiD
    - Registration questions
  - Shared examples of best practices:
    - ALS Scheduling and ESAFS System

WG OUTCOME 1: SOFTWARE, HARDWARE,…

Tasks use various software, hardware and applications

- Front-end software: HTML, angular, node.js, asp.net
- Back-end database: ORACLE, MySQL, SQL Server, Excel, Access
- Hosting infrastructure: LINUX, Windows Server, Weblogic

Graphical Illustration



Argonne NATIONAL LABORATORY

WG OUTCOME 2: BENCHMARKING

Comparing User Registration Forms

- No surprise -- **~90% of the information requested is common to all**

	NSLS II		APS		LCLS	SSRL	ALS
Fields	**Field**	**Req'd?**	**Field**	**Req'd?**			
Previous Guest	Y	Y	Y	Y			
Emergency Contact	Y	Y	Y	Y			
US Citizen	Y	Y	Y	Y			
Country of Birth	Y	Y	Y	Y			
Current Affiliation	Y	Y	Y	Y			
DOB	Y	Y	Y	Y			
Gender	Y	Y	Y	Y			
Country	Y	Y	Y	Y			
First Name	Y	Y	Y	Y			
Middle Name	Y	N	Y	Y			
Last Name	Y	Y	Y	Y			

	NSLS II		APS		...
Fields	**Field**	**Req'd?**	**Field**	**Req'd?**	**Fiel**
Proposal ID	N		N		Y
Country of Second Citizenship	N		Y	Y	N
Subject Code (type of science) /Field of Research	Y	Y	Y	Y	N
Thesis Research (yes or no)	Y	Y	N		N
Health Insurance? (yes or no)	Y	Y	N		N
Family Members (yes or no - foreign or not)	Y	Y	N		N
Lead Investigator	Y	N	N		Y
Affiliation Fax	Y	N	Y	N	Y
Funding Source	N		N		Y
Contact Name	Y	Y	Y	Y	Y

Note: Sample of differences are highlighted in red

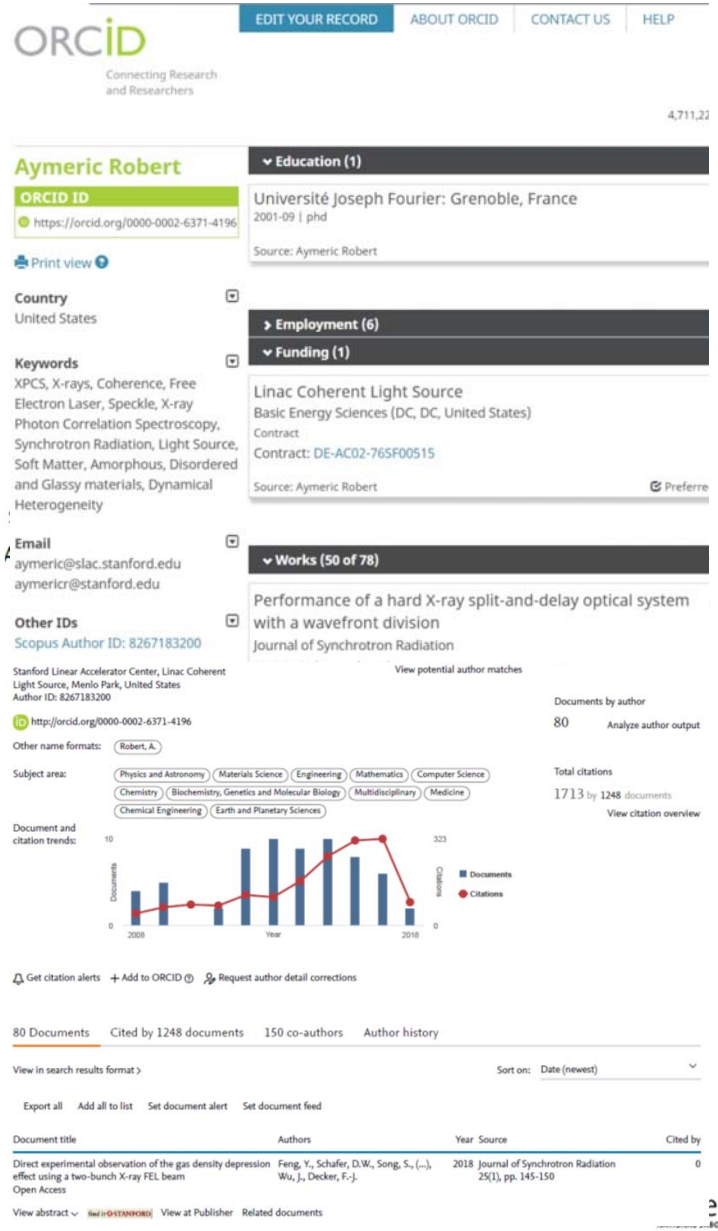
WG OUTCOME 3: FACILITY OBSERVATIONS

- Most user facilities are ***not fully satisfied*** with their current systems
- Each facility is ***planning to change/update*** some of their systems
- There are various levels of interests in ***sharing data among facilities***
- Each user facility has its ***own identification*** mechanism
- A ***common identifier is essential*** to share information

Selected Examples
NSLS II
Considering Softek scheduling
Purchased, evaluating Fluid Review
Safety approval included in Fluid Review
LCLS
Evaluating proposals with Wizehive, Fluxx, Fluid Review,…
Softek scheduling is being considered
ORCiD implementation into any new system
APS
Reviewed Softek scheduling and ESAFS
Softek scheduling is under consideration
ORCiD into registration and proposal system in summer of 2018
Will look into Fluid Review, Fluxx, Wizehive
ALS, SSRL
Etc…

WG OUTCOME 4: ORCID OBSERVATIONS

- ORCiD is an ***existing, global author/institution identifier system*** currently used in publication world
- ORCiD is ***already*** a field used by many scientists ***in user profiles***
- ORCiD is ***already incorporated*** into ***registration and/or proposal systems*** at most of our facilities
- Publications are an important ***metric for facilities and DOE for measuring success***
- ***Capitalizing*** on ORCID as a ***backbone for a common identifier*** through our processes FROM publications (i.e. down-end) TO user registration (i.e. first step)



PROPOSED NEXT STEPS

- Our priorities will remain to continue managing user science programs to their existing levels of excellence
- Develop a robust plan for the future
- We should socialize the plan and actively engage with our stakeholders
- A global and centralized system for all user facilities would be ideal but does not seem realistic at the present time. Or should we explore this route, in parallel?
- We propose to identify areas that could lay the foundation for demonstrating that we can collectively improve in these areas
- Continue to keep identifying areas and gradually streamline and exchange information by implementing common approaches for some of our processes

SUMMARY

- Identified many similarities among the many processes managed by the User Offices
- Identified drastic differences in the solutions employed, developed, or planned for upgrade
- International competition has already moved in this direction. We should immediately capitalize on what is already known and in place.

Your Guidance & Feedback Requested
Is the direction proposed by the WG appropriate?
Did WG miss/ignore anything that you believe is important?
Should WG continue in the same direction?
What do you think would be an appropriate time-frame for presenting you a detailed plan of action?

UPDATE ON ORCID IDENTIFERS

PERSISTENT IDENTIFIERS*

DOE/SC, SSURF, and Facilities investigating ORCiD IDs

- January 2016 journals and publishers begin requiring ORCID iDs for authors
- Early 2016, ORNL approached DOE's Office of Science and Technical Information, ORCiD and some publishers (APS and ACS) about a project to create a new identifier-enabled workflow for user facilities
- June 2016, the Society for Science at User Facilities (SSURF) Annual Meeting focuses on persistent identifiers and data sharing
  - Recommends that SSURF work with DOE to pilot training reciprocity program using ORCiD iDs
- November 2016, SSURF and national lab attend PIDapalooza conference to introduce user facilities to identifier world
- In January 2017, DOE, national laboratories, SSURF, CHORUS, publishers, and ORCiD established a working group to define terms, user stories, and information flows that ***leverage open identifier infrastructure***
  - Report published outlining findings and recommendations

*courtesy of Stephen Streiffer

PERSISTENT IDENTIFIERS

Pilot 1: Integrate identifiers into user facility registration and proposal processes. ORNL, ALS, EMSL, SSRL, and BNL have incorporated ORCiD into their registration and/or proposals systems, with ORNL leading the way

Pilot 2: Integrate award and facility IDs into the manuscript publication process

- Collect ORCiDs at time of manuscript submission or acceptance
- Couple collection of ORCiDs with other data from the author's ORCiD record
- Amend Journal Article Tag Suite (JATS) standard to enable collection of facility use information

Pilot 3: With the use of ORCiDs pilot a training reciprocity program for users (BES/SSURF)

Note: ORNL recently started pushes of beam awards to ORCID records. Use the ORCiD permission token to post award metadata (Proposal/Project Identifier, facility name and facility organization ID). Facility service is planned next.

PERSISTENT IDENTIFIERS

A plan has been developed to integrate with the publishers

Path 1: Work with editorial office systems on a solution that ingests facility information directly from a user's ORCiD profile

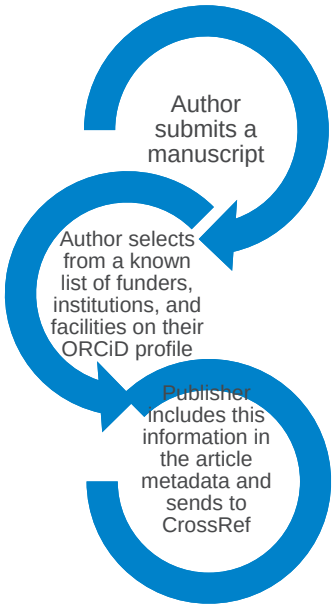
Path 2: Build a stand-alone widget that pulls facility information directly from a user's ORCiD profile into non-editorial office system workflows, such as proofing or license signing, where a publisher can choose when they'd like to receive this data

Note1: Either plan would also apply to ingesting funder and institutional data
Note 2: An update to the JATs is required to support facility information

JATs Committee just approved a change to the standard to create the "contributed-research-group"

GOAL WOULD ALLOW USER FACILITIES TO PULL PUBLICATION INFORMATION DIRECTLY FROM ORCID AND THE PUBLISHER*

- Authors and co-authors are presented with a list of all facility, funder, and institutional information (including PIDs) associated by those parties to their ORCiD profile
- They can select which information to apply to a given piece of research for publication, but additionally report other information not found in the ORCiD record
  - If a dataset was created and published to a repository, the DOI for the dataset can also be pulled into the publication metadata
- The publisher will include this information (and the underlying PID) in the publication metadata, and feed it back to CrossRef (and thus ORCiD) so that facilities, funders, and institutions are aware that they were properly acknowledged



Courtesy C. Schrof, ORNL