PubDAS

a PUBlic Distributed Acoustic Sensing datasets repository for geosciences
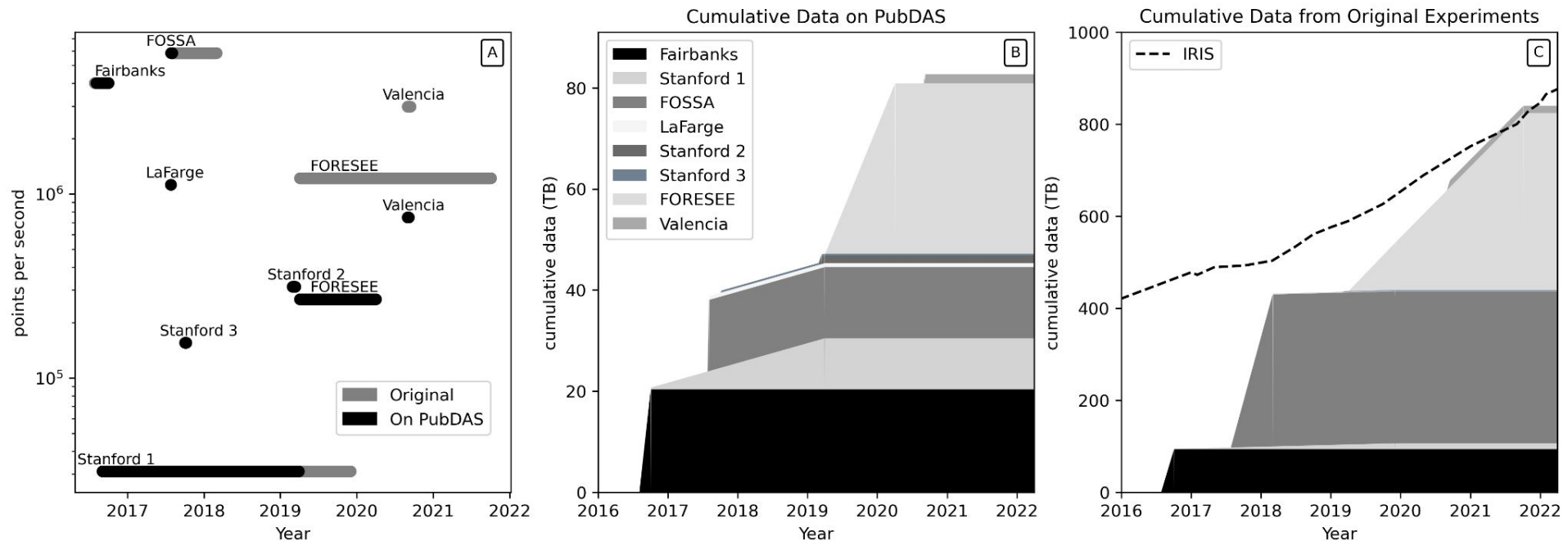
Zack J. Spica[1], Jonathan Ajo-Franklin[2], Gregory C. Beroza[3], Biondo Biondi[3], Feng Cheng[2], Beatriz Gaite[4], Bin Luo[3,α], Eileen Martin[5], Junzhu Shen[6], Clifford Thurber[7], Loïc Viens[1,β], Herbert Wang[7], Andreas Wuestefeld[8], Han Xiao[9,γ], Tieyuan Zhu[6].

https://eartharxiv.org/repository/view/3574/

A data storage issue

DAS can easily generate tb+ of data per day

A data storage issue

No access to federally funded research datasets

No instrument pools

Instruments are expensive → exclusive to rich universities and the industry.

As a result:

- The DAS community is very small.
- Slows development of "good practice" (e.g., Github codes)
- Slows pursuit of scientific discoveries that might be facilitated by existing, *but inaccessible*, datasets.

Characteristics of the PubDAS repository

| Name	IU	T. span (d)	Format	Sps (hz)	Vol. (Gb)	GL (m)	CL (m)	CS (m)	units
Fairbanks	iDAS	59*	TDSM	1,000	10,441	10	4,000	1	$\dot{\epsilon}$
FORESEE	iDAS-v2	365	HDF5	125÷	29,338	10	4,900	2	$\dot{\epsilon}$
FOSSA	iDAS-v2	7	TDSM	500	11,680	10	23,300	2	$\dot{\epsilon}$
LaFarge	iDAS	2*	SEG-Y	1,000	45	10	1,120	1	$\dot{\epsilon}$
Stanford-1	ODH3	940	SEG-Y	50	18,908	7.14	2,500	8.16	ϵ
Stanford-2	ODH3	14	SEG-Y	250	2,887	20	10,200	8.16	ϵ
Stanford-3	ODH4	6	SEG-Y	~	92	~	2,500	8.16	ϵ
Valencia	A1-R	7	HDF5	250÷	3,213	30.4	50,000	16.8	$\dot{\epsilon}$

How to access PubDAS?

Here

Globus delivers fast and reliable big data transfer, sharing, and platform services directly from your own storage systems via software-as-a-service using existing identities with the overarching goal of unifying access to data across tiers
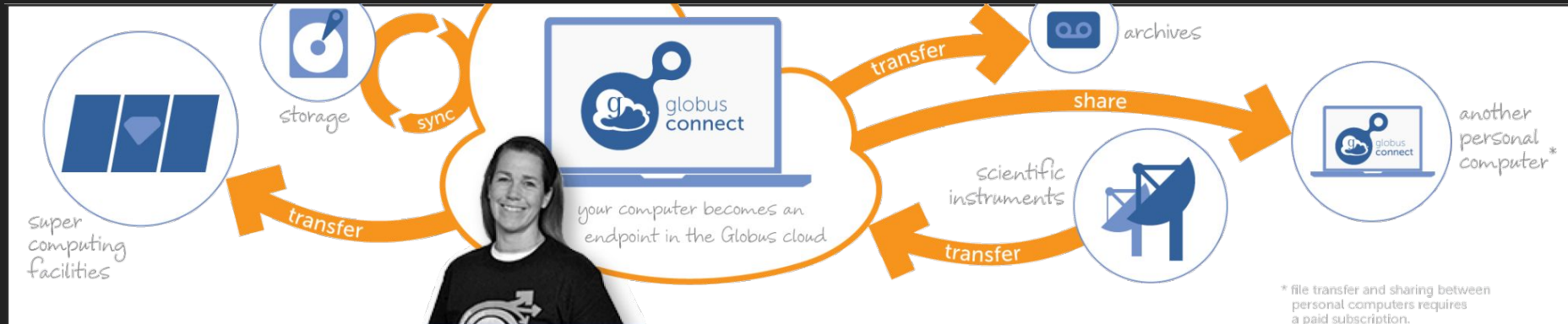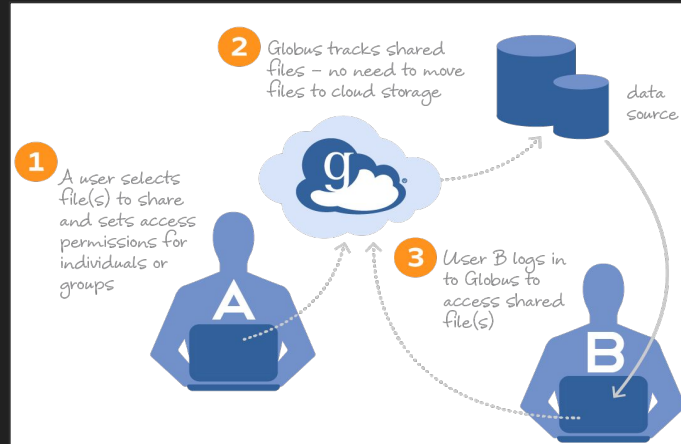
How to access PubDAS?
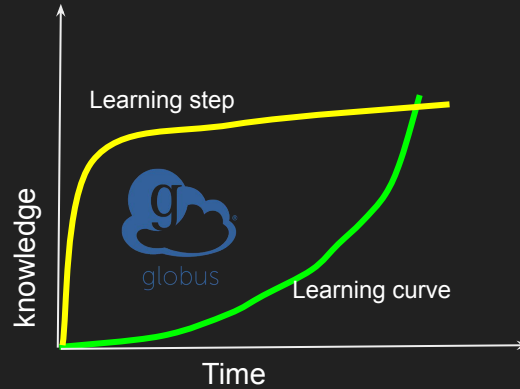
Here

**Globus facilitates data transfer by handling all the complex aspects of large-scale transfer.**

How to access PubDAS?

Here

3 things to know:
- Endpoints
- Collections
- Globus Connect

Globus refers to the places that data are stored (such as your computer, the cloud, server) as endpoints. **Data stored on these endpoints are organized in collections**. The terms endpoint and collection are used somewhat interchangeably, however one endpoint can host many different collections.

Demo Time!

Here

Step 1: create a globus ID
Step 2: Install Globus Connect Personal
Step 3: Download data
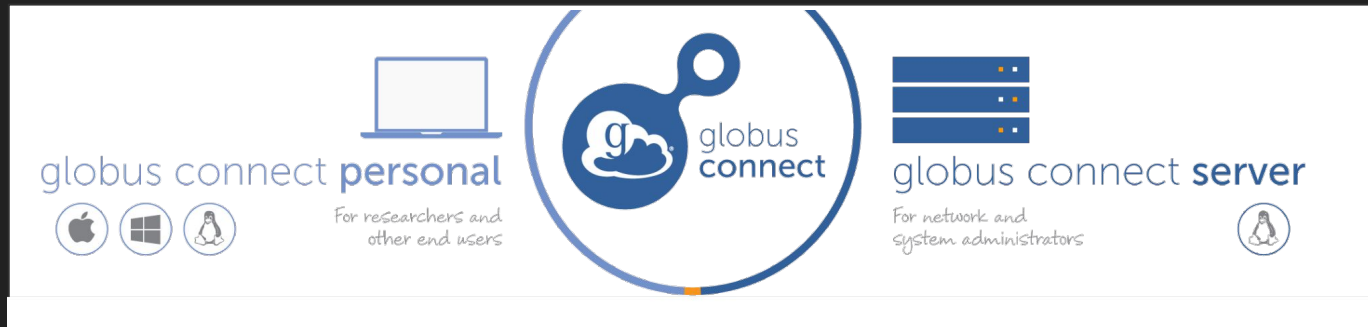
Other useful links

https://www.globus.org/

The step-by-step guide to log in and transfer files with Globus is accessible here.

Globus Connect Personal basic tutorial is also available on Youtube

Globus docs

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