

IRLDAT Use Case

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**Technological University of the Shannon:
Midlands Midwest**

Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir



AISHT

Acoustic Information Structured by Hierarchical Tagging



Phase 1



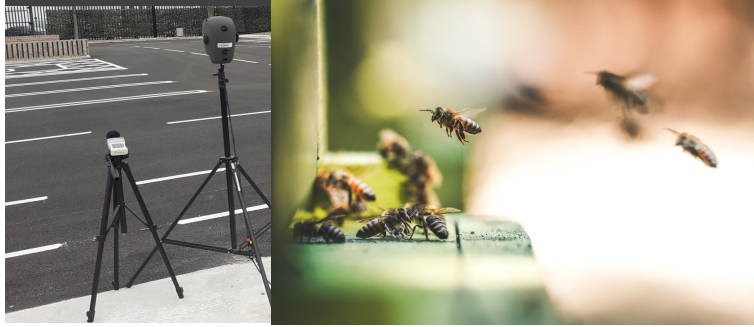
Roadside Acoustics
Flaithr  Neff
Patrick Duffy

Roadside Acoustic Signals (.wav)
+
Environmental Metadata (.csv)
+
Road & Vehicle Metadata (.csv)

Python Script

HDF 5

Phase 2a



Roadside Acoustics

Bee Bioacoustics
Flaithr  Neff - Frank Doyle
James Kelly - Faye Gurnett

Hive Acoustic Signals (.wav)
+
Environmental Acoustic Signals (.wav)
+
Timestamped Environmental
Metadata (.csv)

Python Script

HDF 5

Phase 2b



Roadside Acoustics
Bee Bioacoustics

Acoustic Vehicle
Alerting System
(ISO & UNECE)
The National
Disability Authority

Additional AISHT Onboarding
Joe Fitzpatrick
Kevin Garland
Mike Gavin

Standard Open Soundscape Ontology and Active Scenario Descriptors

Phase 1: EUDAT (Recap)

Data captured on the FMCI test-track in Shannon. Data processed in Cork (Flaithrí) & Limerick (Patrick)

In the primary ReadMe file, we need to explain the project and the original purpose behind the datasets we are uploading. We also need to describe what kind of feedback we would like (if possible) from other researchers using these data and how to communicate this to us.

<input type="checkbox"/>	Name	Size	Modified
<input type="checkbox"/>	ford_dry	22.6 MB	2 lá ó shin
<input type="checkbox"/>	ipace_dry	16.3 MB	10 uair an chl...
<input type="checkbox"/>	skoda_dry	17.1 MB	5 lá ó shin
<input type="checkbox"/>	Readme.md	< 1 KB	2 lá ó shin

INTERACTING WITH EUDAT SERVICES

1

FarSide1.csv
159 B, 6 lá ó shin

Activity B2S... Che... **Com...** Shar... Versi...

Flaithri Neff

Write message, @ to mention someone➔...

Flaithri Neff ... 2 lá ó shin

Thanks for catching that **PD** Patrick Duffy - setting up a task series to fix.

PD Patrick Duffy 2 lá ó shin

Flaithri Neff Wind direction data is missing from the i pace .csv files.

2

+ Add a task to "Tasks"...

I-Pace Wind Direction Fix Tomorrow at 15:00

- Edit I-Pace .csv files to include wind direction data
- Replace I-Pace .csv data and HDF5 files on storage
- Rerun Python script

I-Pace Wind Directi...
Last modified last Dé Máirt a...

Started on 2 Bealtaine 2023 at 14:00

Due tomorrow at 15:00

All day

Tasks

Details **Notes**

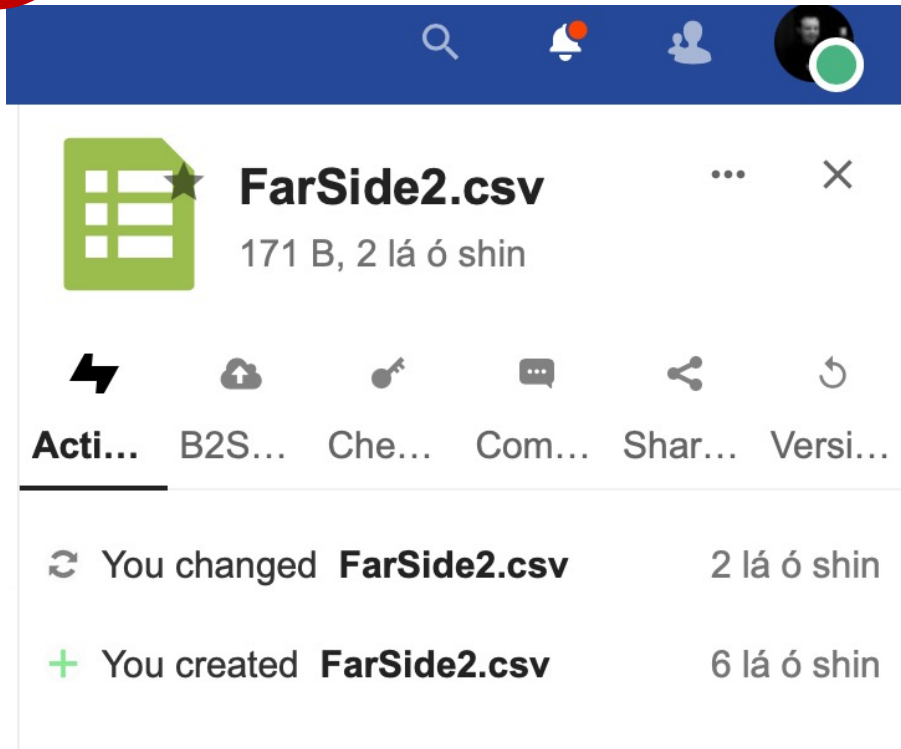
Steps:

1. Edit I_Pace .csv files to include wind direction data.
2. Rerun Python script
3. Replace .csv files and HDF5 output file.

3

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
				<ul style="list-style-type: none"> 14:00 Debrief - w... 15:00 I-Pace Wi... 		

4

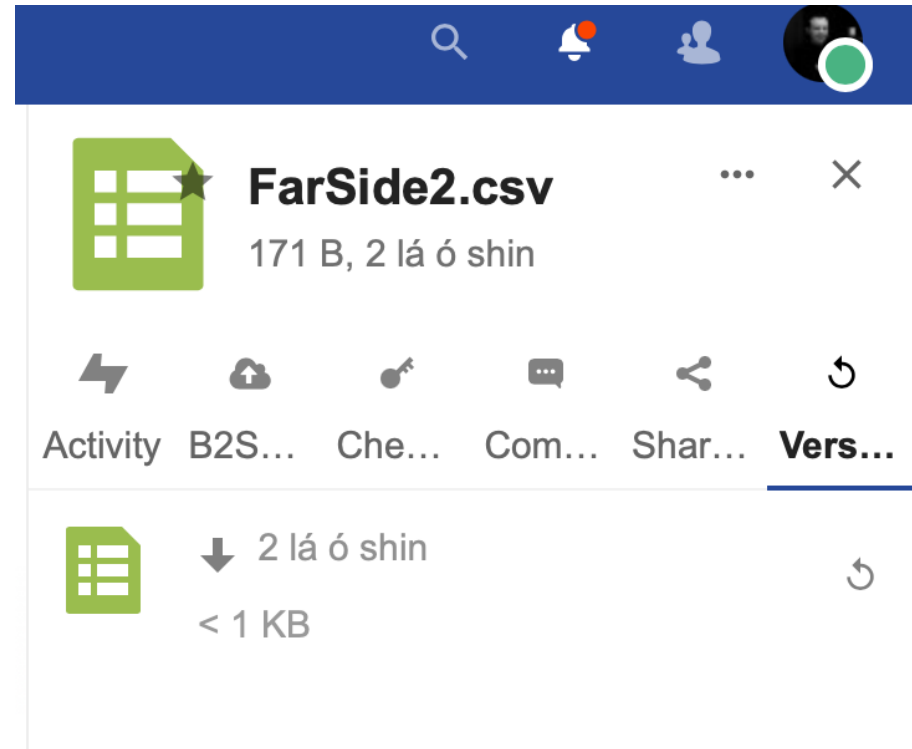


FarSide2.csv
171 B, 2 lá ó shin

Activity B2S... Che... Com... Shar... Versi...

🔄 You changed	FarSide2.csv	2 lá ó shin	
+	You created	FarSide2.csv	6 lá ó shin

5

















FarSide2.csv
171 B, 2 lá ó shin

Activity B2S... Che... Com... Shar... **Vers...**

📄	↓	2 lá ó shin	↺
		< 1 KB	

Clicking this file will download the first version that was replaced 2 days ago.

6

-  You changed **FarSide2.csv** 2 lá ó shin

-  You shared calendar **Tasks** with  **Patrick Duffy** 2 lá ó shin
- ✓ You created todo **Replace I-Pace .csv data and HDF5 files on storage, Rerun Python script and Edit I-Pace .csv files to include wind direction data** in list **Tasks** 2 lá ó shin
- ✓ You updated todo **I-Pace Wind Direction Fix** in list **Tasks** 2 lá ó shin
- ✓ You created todo **I-Pace Wind Direction Fix** in list **Tasks** 2 lá ó shin
- ✓ You solved todo **Testing** in list **Tasks** 2 lá ó shin
-  You commented on **FarSide1.csv** 2 lá ó shin
Thanks for catching that  **Patrick Duffy** - setting up a task series to fix.
-   **Patrick Duffy** commented on **FarSide1.csv** 2 lá ó shin
 **Flaithri Neff** Wind direction data is missing from the i pace .csv files.
-  You commented on **FarSide1.wav** 2 lá ó shin
Thanks  **Patrick Duffy** - good point. Let's also include the recording device specifications too, since the reference mic data is separate from the Zoom H6 recorder itself (unlike the onboard mics of the H4).
-   **Patrick Duffy** commented on **FarSide1.wav** 2 lá ó shin
 **Flaithri Neff** We should also extrapolate the audio file header data for ease of access to things like sample rate and bit depth for other researchers.

EXPERIENCE DURING PHASE 2 SETUP



Excellent user-centric approach

One-to-one interviewing and real-time testing

Streamlined structure of AISHT folder

Flexibility for PI

Appropriate privileges across user-groups



TUS instance

User-centric setup process

Straightforward colleague onboarding

Localised contact-point

WHY IRLDAT IS A SIGNIFICANT ENABLER FOR MY RESEARCH

Ease of use: Both browser side and Nextcloud have a pleasing and easy-to-use UI. Onboarding issues in Phase 1 now solved.

Excellent traceability: All steps and actions are transparent and trackable.

Version control: Removes the worry about accidental overwrites. Embeds active-data sharing from initial project beginnings to open-data reuse by other research teams.

Trust: Peace-of-mind when it comes to the organisations involved in the design, implementation, and operation of EUDAT/IRLDAT services. Irish leading institutions.

Connectedness: Very easy to pull in collaborations from outside my organisation. Although not impossible, our usual platform makes this very cumbersome.