

PAMGUARD Maintenance and Support Activities

1st April 2016 – 30st June 2016

Tasks Completed:

Bug Fixing

The following bugs were fixed using JIP support funds in this period:

Bug 271. A number of problems were fixed in the database import system (used when converting old MS Access databases to SQLite) 1) Now correctly updates click labelling cross referencing and 2) Now correctly imports previous configuration settings.

Bug 272. File types: Some File Open / File Save dialogs were allowing selection of all file types. e.g. Save Configuration As, Section of whistle classifier training file, Map file Selection, These have now been changed so that only the correct type of file can be selected.

Bug 274. GPS Memory leak. A Memory leak associated with GPS data collection has been found which could cause PAMGuard to run out of memory after a day or two's operation. This has now been fixed.

Bug 275. Painting of thumbnail on the Map display time slider. Have fixed a small problem in the graphical display.

Bug 276. The default hydrophone sensitivity was -201dB re 1V/uPa. This was supposed to be used with a default preamp gain of 30dB. For some reason gain was no longer being added. We have therefore set a default sensitivity of -170dB and left gain at zero. This is more typical of many hydrophones in use today.

Bug 277. Text fields in classifier dialog were not large enough to display times greater than 10ms. We have increased length of text fields in the dialog.

Bug 278. Have future proofed against potential binary file format changes in future releases. New PAMGuard releases will always be able to open older binary files, however, with previous PAMGuard releases if a newer file format was opened, then PAMGuard was unable to check that the file format was newer and would attempt to read the files and might even corrupt them. Now it will recognise that it cannot open the files, display appropriate error messages and not attempt to read the files. NOTE that at this time there are no planned file format changes and that this is purely a future proofing exercise.

Bug 279. GUI Resizing: The whole PAMGuard GUI would suddenly resize to something very small when a dialog is opened. This has been traced to improper use of a common dialog component SourcePanel which tries to repack its parent Window. Some programmers had inadvertently set it to repack the main PAMGuard GUI instead. This has been Fixed.

Bug 280. Recorder control option to automatically restart recording were causing confusion. It was working in that the recorder would return to its previous state, but it was sometimes difficult for users to set it so that recording would always start as soon as PAMGuard started. More sensible and easy to understand options have been developed in a new options dialog.

Target Motion Tracking

Considerable work on improved target motion tracking in PAMGuard has been conducted during this period by Douglas Gillespie and Jamie Macaulay. Features of the new tracking software include:

1. A merging of the structures and database interfaces used for online tracking and offline tracking. This means that tracks and localisations made during real time operations are now available in the PAMGuard viewer either for checking of for continued analysis.
2. A choice of 2D and 3D localisation algorithms is available to the user.
3. Improved error analysis and reporting is being developed both for display on the map and logging to the database.

It is expected that this work will be available in a new PAMGuard release at the end of the summer.

Code Maintenance

Release 1.15.03 April 2016

Version 1.15.03 was released in April containing bug fixes (bug report 271) concerning the import of data and configurations from Access databases to SQLite. Problem 1 was that the incorrect settings were being imported into the new database. Problem 2 was that indexing of imported click events in the new database was incorrect.

There were 2338 downloads of V 1.15.03 between its release and 30 June although only 489 were registered, possibly indicating that a website is downloading repeatedly and automatically.

Website Administration and Maintenance

The PAMGuard website had been modified to offer clearer options for downloading 64 and 32 bit versions.

Support to Developers

A former St Andrews Student, Marjolaine Caillat, has made some improvements to the PAMGuard click classifier to aid in beaked whale identification. These changes have been merged into the main PAMGuard code branch ready for the next release.

User Support

39 support emails were exchanged in this quarter, from 10 different individuals.

Voluntary Contribution System

Rachael and Doug have created a poster for the conference “Effects of noise on aquatic life” in Dublin, July 2016. This poster advertises the PAMGuard software and the maintenance and voluntary contribution system.

There are now 5 companies that have signed up to the voluntary contribution Framework Agreement. Note: we have yet to actually receive any contributions for Q1 2016. Q2 2016 is now over, however, given previous feedback, we will wait until August before requesting contributions for Q2 2016.

Once contributions have been requested for Q2 we will arrange a forum (likely end of August) to discuss the status of the voluntary contribution system and the budget that we have for next year for maintenance tasks.

Downloads:

The web stats show a total of 3114 downloads of PAMGuard software between 1st April 2016 and 30th June 2016.

Activity Reports

Download Name	Downloads
Activity Report January to March 2016	55
Activity Report June 2012 to January 2013	14
Activity Report October to December 2015	323
Activity Report July to September 2015	264
Activity Report April to June 2015	34
Activity Report January to March 2015	29
Activity Report October to December 2014	29
Activity Report February 2012	56
Activity Report March - April 2012	34
Activity Report May - June 2012	16
Activity Report June to December 2012	175

General Configuration Files

Download Name	Downloads
DIFAR Configuration	51
Sperm Whale Click and Dolphin Whistle Detection	86
Sperm Whale Click Detection	61
Porpoise Click Detection	90

Likelihood Detector Configuration Files

Download Name	Downloads
Sperm Whale	48
Humpback	47
Bowhead Whales	55
Beaked Whale	49
Readme File	170

PAMGuard Software

Download Name	Total
1.15.03 Core 32 Bit	212
1.15.03 Beta 64 Bit	2126
1.15.02 Core 32 Bit	9
1.15.02 Beta 64 Bit	34
1.15.00 Beta 64 Bit	481
1.50.00 Core 32 Bit	7
1.14.00 Beta	24
1.13.05 Beta	8

1.13.04 Beta	1
1.13.03 Beta	0
1.13.02 Beta	2
1.13.01 Beta	0
1.13.00 Beta	35
1.12.06 Beta	6
1.12.05 Beta	165
1.06 Core	2
Beta 1.10.00	2
	3114

Publications

Download Name	Downloads
Free PAM software to improve marine mammal detection	50
A quick guide to PAMGuard	87
Free PAM software to improve marine mammal detection	32
PAMGUARD: Open Source Software For Real-time Acoustic Detection and Localisation of Cetaceans	490
Pamguard: Semiautomated, open source software for real-time acoustic detection and localisation of cetaceans	148

ROCCA Configuration Files

Download Name	Downloads
ETP Species Classifier	56

Details of registration information from the download pages are as follows:

Industry	Downloads
Oil & Gas	68
Civil Engineering	12
Offshore Wind	8
Tidal and Wave Energy	8
Academic Research	200
Other	98
Rather Not Say	23

Operation	Downloads
Real time mitigation	101
Abundance Estimation	73
Behavioural Research	92
Other	123
Rather Not Say	25

Geographic	Downloads
US	64
Europe	177
Africa	27
Australasia	8
Asia	29
Other	83
Rather Not Say	25

Location	Downloads
Global	71
US	52
Europe	134
Africa	19
Australasia	5
Asia	27
Other	80
Rather Not Say	27