



# PRS User Group, Lancaster, Nov 2009

*Closing the Feedback Loop  
...or Making Votes Accessible!*

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JISC

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# Team



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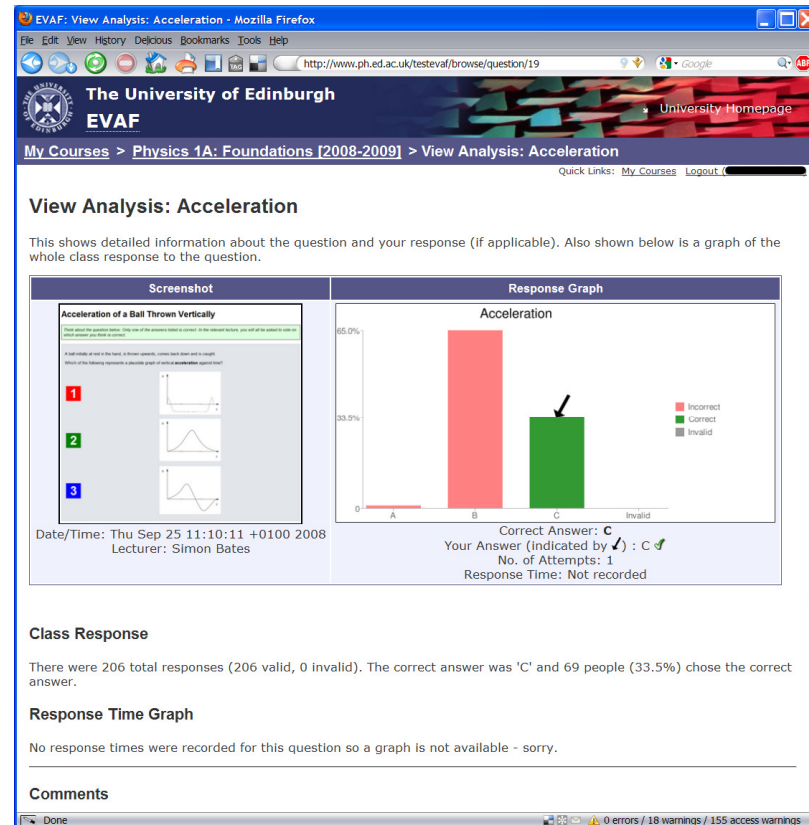
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# Why am I here?

*“EVAF\* – an online tool to provide students and staff with analysis and visual feedback of data captured using 'clickers' in their lectures – for revision and feedback purposes”*



\* = *Electronic Voting and Feedback*

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# Outline...

- EVS @ Edinburgh
- What's happening to vote data? Feedback?
- Outline of EVAF & EVAF4All Project
- Demo
- Status & Questions

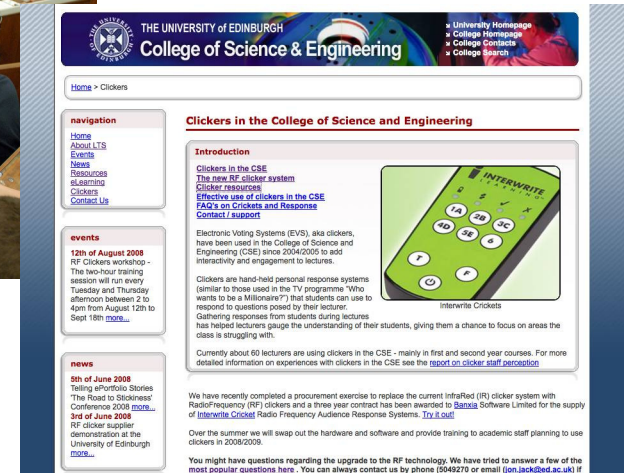
# EVAF @ Ed : Past and Present



- Pre-2005 – coloured card used in Physics 1A



- 2005-6 – PRS IR clickers bought and used



- 2007 – ‘loanership’ scheme with ~2500 RF clickers
- 2008 – EVS underpins college strategy.

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# Data? Feedback?

- Q1: What is happening to all this data?
  - Q2: Is there a way to provide personal feedback to students (+ staff!)
  - Q3: What is the motivation for feedback anyway?
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- A1: Nothing! Just sitting there on staff PCs
  - A2: Not easy - how?
  - A3: Lots – student revision, staff development, NSS



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# Why are we not using this data?

- Because it is too hard to match up students to clickers
- Difficult to keep track of students on courses
- How to give students access to their data alone?
- Fundamentally - way too much effort for busy staff members – and each member has to do a lot of work!



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## Wait a minute...Reinventing the wheel?

Q: Don't EVS vendors like have software to do all this?

A: Not really. Solutions are often still too staff time intensive (managing rosters), are not anonymous and/or flexible enough or provide analysis for staff only.

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# EVAF @ Ed

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## Seeds of EVAF – late 2007

- Q: Does the introduction of clicker-loans and better tools allow us to solve this data dead-end and feedback problem?
- A: Yes – with access to clicker-loan system, we can work out which student has what clicker id – and when – a key issue.

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## Aims

*“To create a web-based system (EVAF) to provide staff and students with analysis and visual feedback of data captured using 'clickers' in their lectures – long after the lecture is over.”*

- For Students: review their own responses and whole-class performance
- For Staff: anonymised stats, evaluating effectiveness of questions

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# Objectives

- Easy to Use: even for busy academics – must be easy to upload clicker sessions into this tool. Students must be able to easily identify their weaknesses.
- Must transparently deal with students, clickers, cohort changes, multiple courses, etc
- Robust and Secure: Ensure that students only see THEIR individual responses and not those of other students
- Flexible: work with common question types and with current technologies – PRS v4/5 - ‘open’ questions, confidence, response time.

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## Benefits to students

- Can review their votes well after point of delivery – on multiple courses
- Highlights more challenging material / whole class performance
- Unites students with ‘their data’ – closing the feedback loop

## Benefits to staff

- Easy and effective way to present large volume of personalised feedback to students
- Aggregate data presented anonymously to staff
- Can assess effectiveness of questions used (e.g. hard, ‘banana-skin’ etc....)

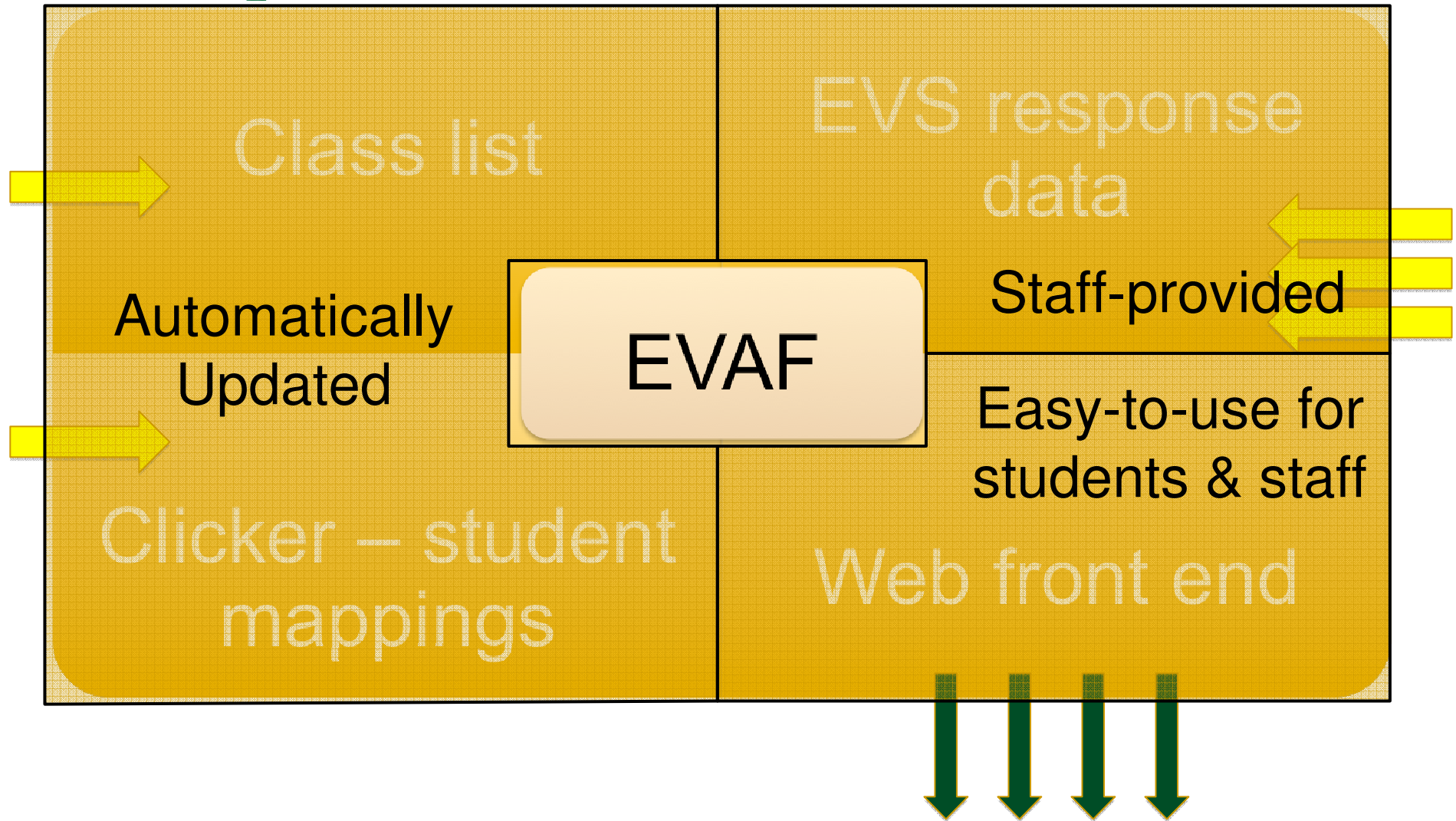
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# EVAF Development

- Design and problem exploration in late 2007
- Pilot Implementation in 2008
- Piloted in Oct 2008, Jan 2009
- 2009-2010: JISC funded as EVAF4All Project:
  - Discover HE/FE partners and develop to allow installation and easily integrate it into *their* loanership system and VLEs
  - To allow different EVS providers' data to be imported (e.g. TurningPoint)
  - To extend for multiple correct answers, etc.
  - Improvements/customisations
  - New Authentication options – LDAP, etc



# Components in EVAF



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# Uploading PRS Sessions

- Not possible to automate uploading PRS session data but tried to make this pain free:
  1. Academic uses PRS/Response as usual in class
  2. Afterwards, export PRS session as a CSV
  3. Log into EVAF and import the session, supplying extra info not given in export – question title, ‘correct answer’ info and ideally a screenshot
  4. New session processed and made available to students (and staff) immediately.

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# EVAF Demo

- As staff member
- As student

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# Feedback from staff/students?

- Some interest from staff – some uptake within Physics & Biology.
- Some (but not great) interest from students – peaking at exam time.
- Better interest in 2009 – ‘leaderboard’ increasing competitiveness
- Staff – generally positive feedback on ability to identify good/bad question outcomes after the fact.

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## Status

- Some EVAF4All functionality still under development
- Plan to pilot at partner institution Jan' 2010
- Release late Q1 2010 – SourceForge, GIT or similar
- Further Development?

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# Contact



- For more information about EVAF and the EVAF4All project, please contact **Simon Bates (s.p.bates@ed.ac.uk)** or **Keith Brunton (keith.brunton@ed.ac.uk)**
- For more information online, visit **<http://www.ph.ed.ac.uk/elearning/projects/evaf>**

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# Extras

# Exporting from PRS v5

The screenshot shows the 'Manage My Data' application interface. The main window displays a table of sessions for 'My Class'. An 'Export Session Wizard' dialog box is open, allowing the user to configure the export process. The 'Export Type' is set to 'Raw Data', and the 'File Format' is 'CSV - Comma Separated'. The 'Export Header' checkbox is checked. The 'Parse' section is set to 'By comma'. The 'Next >' button is visible at the bottom of the wizard.

Alert	Name	Mean	Questio...	Type	Date	Include
✓	My Class (16/09/08 20:52:50)	0.0%	1	Participati...	16 September 2008 20:53:01	✓
✓	Test with no date	0.0%	1	Participati...	16 September 2008 15:08:18	✓
✓	My Class (02/09/08 14:43:07)	0.0%	1	Participati...	02 September 2008 14:43:41	✓
✓	training session 02.09.08	0.0%	2	Participati...	02 September 2008 14:28:13	✓

**Export Session Wizard**

Select the System Type

Export Type: Raw Data

File Format: CSV - Comma Separated

Export Header

Parse ID Force ID

By comma

By Semicolon

By Tab

Your Session data can be used by a variety of Course Management Systems. The Export Type drop-down menu identifies the ones directly supported by Interwrite Response. You will have to decide the file format and whether to export the header with the data. Decide how the file should be parsed, what index key to use, and whether the ID should be forced. Then you will name the file and indicate a directory location for the exported Session data file. When you click on the Finish button, your Session data is then ready for import into your course management system.

● Select an **Export Type** from the drop-down list. Most applications accept an *XML* file format, so choose that if you don't see your course management application in the list.

Next > Cancel

Record Filter: 40 out of 40 Records Found

daniela.prs English (United Kingdom) 40M of 49M

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# Screenshots from PowerPoint?

Screenshots are optional but provide valuable context to students and staff

- Save As...
- Choose GIF, JPG or PNG
- Select 'All Slides' when prompted...

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# Technical aspects

- Backend: SQL
- Front end for Web: Ruby/Rails
- Peripheral technologies: SOAP, XML, AJAX (Prototype), Google Chart APIs
- Authentication: EVAF, Cosign (SSO), LDAP
- Connectors:
  - Clicker-Loan-Systems – SFTP download, Network DB connection
  - Course Student Info – Webservice to WebCT, possibly Moodle 2.0 and BB. (Optional)