Issues with MATHEX

- It is difficult to view the scores of teams for spectators and competitors.
- Spectators and competitors are unable to know how well a team is doing in comparison to other teams.

Project Opportunities:

- Make MATHEX more fun to attend for spectators.
    - If the spectators are more aware of the state of the competition (who is winning and how their team is doing), the event will be more fun for spectators to watch and for students to compete in.
    - If MATHEX is made more fun to attend and participate in, the events will generate more interest. These competitions could become larger with more teams participating or more frequent events.
    - Doing so will promote mathematics to students and spectators, potentially getting more people to consider studying mathematics for their tertiary education.
- Promoting AUT to the users of the proposed system.
    - Use images of AUT's logo as advertisement in the proposed system.
    - Draw more people to doing their tertiary education at AUT. Considering the audience, it may be possible to interest users to study mathematical sciences at AUT.

MATHEX information

- There will be approximately 1000 concurrent users for the proposed system. This includes around 50 judges and the supporters of 400 students.
- The MATHEX events have potential to grow and so the proposed system should be scalable.
- Users of the system will have different types of devices, so the solution must be compatible on a range of platforms.
- There are 20 questions in MATHEX. 5 points are awarded for each correctly answered question.

Key Features

- A security feature is required for judges to restrict access.
- Judges need the ability to input correct, incorrect, or pass into the system.
- Judges need the ability to change their last input (undo) in case they make a mistake.
- Scoreboard will be live and updated in real time.
- A spectator can track a team's progress or see an overall leader board of the scores.
- This project will be open source.

Usability

- The proposed system should be easy to use for judges with simple training.
- The proposed system should be easy to use for judges while they use their existing paper scoring system.
- The proposed system should be easy to use for spectators with basic knowledge/instructions (e.g. a brochure).

Client

- Dr Hankin was most interested in the feasibility study of the project, rather than deliverables.
    - Study should include the scope, time, and cost of the project.
    - Recommend hardware and software options as well as the infrastructure required.
    - If the project is determined not to be feasible, detail why this is the case.
    - It is possible we could present a decent prototype of the system to him and that would suffice.
    - If the framework and documentation is present, and a well-thought roadmap for development that can be utilized by future R&D students.
- Dr Hankin has requested a bar graph display for the spectator/scoreboard view.
- Dr Hankin will provide software components for the mathematical part of the system.
- Wants us to try plug AUT in wherever possible.
- Documentation should be easy to understand for client too.
- A SQL database would be preferred due to existing experience.
- Dr Hankin would like updates when we achieve milestones via email. Other than that, a few face-to-face meetings with the entire team.
- 2 weeks' notice should be given to Dr Hankin to setup a meeting.

Stakeholders

- Dr Hankin is the client and product owner.
- AUT is a major stakeholder.
- Spectators and judges at MATHEX are stakeholders as users.
- Competitors are stakeholders by association – i.e. if the system fails to perform this could disrupt the competition.
- Mathex organisation is a minor stakeholder, as they are not fully aware of the project yet – but will be larger stakeholders in future as the project progresses towards completion.