ICT Project Nomination Form 2012

The teams choose projects based on this short description. There is no guarantee that your project will be taken, make it sound as interesting and as educational as possible.

Project Title:

Life is too short to drink bad wine.

Client retains Intellectual Property: Yes
Confidentiality Agreement required: Yes

Project Description:

Tasmania’s premium wines are made from grapes grown in climates similar to those of the famous European wines - with mild summers and long autumn days that ripen the grapes providing elegance and intensity of flavour. Unfortunately, the grapes do not always ripen perfectly. When the days turn cloudy, calm and moist, a common fungus, Botrytis cinerea, takes the opportunity to rot the grapes. When these rotten grapes are crushed for wine making, the juice turns brown and leads to nasty off-flavours in the wine. Wine makers need to use expensive methods to prevent wine faults caused by ‘botrytis’, or, worse, they may reject the grapes, especially when more than 3% of grape berries are rotten. Grape growers desperately need tools to prevent this weather-driven disease reaching damaging levels.

Kathy Evans and Michele Buntain from the Tasmanian Institute of Agriculture (www.tia.tas.edu.au) have been working with scientists from Plant & Food Research (P&FR), New Zealand, to develop Botrytis Decision Support. Algorithms use monitored temperature and duration of surface moisture for two predictive models:

1. The early season model predicts if greater than 3% botrytis severity could occur at harvest – to support decisions about future management such as whether or not to spray for the disease.

2. The late season model visually tracks the rate of botrytis increase – fast or slow – to support decisions on removal of botrytis-affected grape bunches during ripening and planning of harvest date to minimise botrytis damage.

Web-based delivery is being implemented in New Zealand (www.botrytis.co.nz), whereas Australia needs to develop its own ‘front end’ customised to the needs of grape growers here. Most importantly, a database needs to be developed whereby weather data, from different types of weather stations, are downloaded and converted to a common file format for storage and use by the model algorithms. Code then needs to be developed to display model outputs in a user-friendly format that also allows easy input of key details by the grape grower.

We work closely with the wine grape industry in Australia and can provide all the necessary resources, including access to Tasmanian vineyards, industry people, weather stations and data. You will receive significant support from Kathy and Michele because it is TIA’s strategy to further develop the tool in Tasmania before
extending it to other wine grape growing regions in Australia. Life is too short to drink bad wine, so this is your chance to make a long-lasting impact on an industry that really needs your help.

**Project Technical Information:**

Two or three lines. If you want particular development tools used (development environments, programming languages, database systems), you must state them. If you have no preferences then leave blank and the students will negotiate with you.

The project team will negotiate with us on selection of appropriate development tools. Plant & Food Research (P&FR), New Zealand, own the model algorithms and are expected to provide these to TIA under sub-licence from the Grape & Wine Research and Development Corporation (in Australia). Kathy Evans will communicate project progress with P&FR, who may then respond with specific instructions or recommendations.

**Contact Information:**

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