

PODD TrayScan Workflow

- Project and Experiment setup in Excel file that clients fill out
- Pot placement randomisation from R program which is integrated with Excel file
- Excel file converted to RDF and uploaded into PODD

PODD TrayScan Workflow

- Image scans on TrayScan identified using barcode reader
- Image scans recorded in TrayScan relational database
- PODD Client run as batch job performs SQL query on relational database to find unprocessed image scans and transfers the files to a cluster for processing

PODD TrayScan Workflow

- Cluster runs CSIRO Workspace workflow software to:
 - Align and normalise images of trays
 - Measure leaf areas for each plant in the tray
- Leaf areas graphed against time to generate growth rate curve which is given as a CSV file

PODD Events (being implemented)

- PODD will record events for image acquisitions and image processing.
- Image acquisition events link back to the trays.
- Image processing events link back to image acquisition events.
- Trays are linked to the pots, the plants and their genotypes

Plant growth curves

- Plant growth curves are derived from images
- Results of the plant growth curve analysis link back to the analysis events