

Future Problem Solving Programme
1999 Problem #2 Fuzzy Situation. Computer Error
Middle/Senior Divisions

Welcome to the Australian Internet Map Server (AUSTRIMS). This Web site enables users to interactively obtain and analyse information about Queensland, Western Australia, Victoria and Tasmania. AUSTRIMS was created to give public access (individuals, businesses, schools, and governments) to information about this area.

I am Aida, the Artificial Intelligence Data Analyst for AUSTRIMS . I am constantly communicating with computer systems around the world to mine data for my databases. I talk to the Landsat satellites, the computers linked to Internet II, and others. I am excited about my new roaming robots which are under my jurisdiction in remote areas of the four states. They are gathering data on animal and plant species and communicating their finds immediately to me.

Users can create 3-D maps of any part of these states, and they can query the data they see displayed. My many layers of data include geology, botany, zoology, population demographics, and laws governing things like the environment and land and water use. My data sets can produce visualisations of underground mineral resources like geothermal areas, natural gas fields, and precious metals.

My real power is my ability to make complex decisions about complex issues, such as where to build a solar energy farm or an aquifer cleansing centre for you. I can quickly access all the data needed to answer your questions and give you the best decisions. This saves you time money, and person power.

Today is October 14, 2015. You are visitor number 883,564 to the AUSTRIMS Web site.

Right now, the governors of the four NIMS states are Web-conferencing.

Governor Tom Kim of Victoria: I think we all agree that Aida is serving us well in providing immediate access to information that allows us to make much wiser decisions about the use of our states' resources. I know Victoria education districts have benefited by Aida's new ability to predict where population will grow and to decide where new schools should be built. It is this very predictive decision-making power that has me concerned. What happens if the forecasts are based on faulty data? Remember that two years ago the census statistics were incorrect because of inaccurate entries.

Governor Kathryn Torres of Western Australia: I agree. A decision on schools is one thing, but Aida now can decide which species are threatened by development, where to drill for natural gas, and which zoning laws should be changed. Anyone can access this information, and many have. Even before the decision making power went on-line, people moved to Perth based entirely on Aida's information. You can see the orthophotos of any size area, down to the actual city block. With these you have actual measurements of the property, including how big any trees are on the property. You can access who owns it, what the zoning laws are, and who the neighbours are, including the ages of their children.

Governor Harry Wildman of Tasmania: We haven't even begun to realise the potential impacts of Aida's power. Until recently, only the governments have had the security clearances to access its decisions and we've been impressed by the results of the decisions. Aida has saved us time, energy, and a considerable amount of money. However, Aida is really programming itself now. How secure is this system from computer viruses and hackers?

Governor Samantha Hansen of Queensland: My staff and I believe that we probably couldn't have reached such unbiased and quick decisions by human committee work alone. However, I share the concerns of the rest of you. Sometimes, pure statistical analysis isn't enough to address all the interrelated issues. Now that the public can access Aida, individuals and businesses may rely heavily on Aida for decision-making. A computer error has the potential to have a damaging impact on many projects. We need to call in a team of human problem solvers. They can help us apply some practical intelligence to the challenges .

You are the team selected to help the governors. Identify the challenges of Aida relating to possible computer error, and work through the FPS process to make your recommendation for a solution.