IMAGINiT TECHNOLOGIES
A RAND Worldwide Company

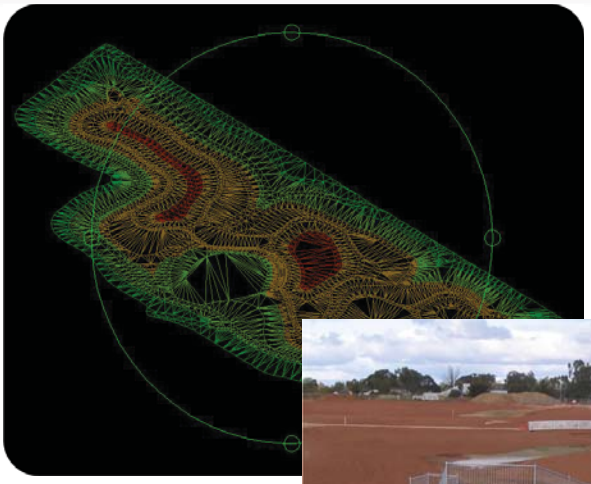
Client Success Story

Capogreco EXCAVATIONS

Capogreco Excavations Successfully Transitions from 2D to 3D Design

THE CLIENT

Capogreco Excavations in Mildura, Victoria is a civil construction company established in 1992. The company predominantly services the water industry, upgrading water infrastructure such as stormwater, sewer, water supply and irrigation infrastructure. In addition, their projects include expanding and upgrading infrastructure, drainage works, and performing bulk earthworks.



THE CHALLENGE

Capogreco wanted to incorporate GPS guidance in their two Caterpillar 322C and 325DL excavators. They needed a tool to model 3D surfaces with the ability to edit designs quickly that would work effectively and efficiently with the GPS. The terrain to be excavated was 170,000 square metres and included wetlands, reed beds, footpaths and flood plains graded to contour and also incorporated the installation of 1800NB RC pipes, headwall, and weir construction.

DESIRED OUTCOME

The project was the excavation of the Monash Wetlands for the Mildura Rural City Council to service future developments in the area. It was also to include a stormwater collection system that had a sound hydraulic capacity and at the same time provided facilities such as walkways thoroughfares and playgrounds in the natural environment.

THE SOLUTION

Capogreco employee Andrew Ottanelli had used AutoCAD® R12 before, and when searching for 3D surface modelling software AutoCAD® Civil 3D® was a possible choice. He was sent an invitation to an Introduction Day from IMAGINiT Technologies which he attended and found beneficial to the decision making process. He weighed the benefits of each of the software packages and decided that Civil 3D was the best choice. "If you have used AutoCAD before, picking up Civil 3D is a breeze," Andrew states. He found that when working with the surveyor and designer it was much harder to access the levels in the designs. Andrew wanted to start with the basic cut-out, and build the surfaces from this, rather than working directly from the finished product design, the surface modelling tools in Civil 3D allowed him to do this easily.

Andrew attended two training courses, introductory and advanced, with IMAGINiT, which he said was invaluable as he learnt new aspects of the software and how to more effectively use the software. Attending IMAGINiT training and events were also valuable because of the networking opportunities and the ability to share experiences with the other Civil 3D users at the events.

ACTUAL RESULTS

The design was surface modelled in two hours and the project took 18 months to complete, which indicates how efficient the software is to use. "When we look at the cost versus the return it was worth every penny," Andrew says. The IMAGINiT technical team was also beneficial as whenever Andrew had any issues he was able to contact IMAGINiT for support and was always given helpful assistance.

As he often completed work late at night, Andrew found that if he needed to make any changes to any of the designs, he could easily make changes to the surface in Civil 3D in 10 to 15 minutes and then have the updated designs ready for the following day's work. This provided flexibility when using the software with the Topcon control system in the excavator, and the ability to modify designs without difficulty made it easier to communicate changes with the clients and contractors.

Andrew says that Capogreco was able to win the job by using the right technology and by offering efficient tools that compute survey information and volumes. This also facilitated more accurate quoting and enabled Capogreco to operate a much more precise business that utilised the technology to the best of its ability.