

# **ePlan - A model for remote electronic plan lodgment**

## ***Original concept (2002)***

### **Introduction**

Land and Property Information New South Wales (LPI) is leading Australia and possibly the world into a new era in lodging and processing plans of land subdivision. The Electronic Plan Lodgment project, ePlan aims to accept for remote lodgment, plan information in electronic form and utilise that information in business processes.

ePlan was instigated in response to the fact that around 80% of surveyors operate in an electronic environment utilising advanced technology to prepare plans.

The prime objective in establishing a facility for remote electronic plan lodgment is to provide a revolutionary alternative to the traditional and time consuming manual process at this final and critical phase of land development. ePlan is an Internet facility that provides for the remote electronic lodgment of subdivision and strata plans and associated instruments. The facility allows a surveyor, or other authorised person, to submit plan and document files at LPI without the need for a city agent. It represents a significant change to business practice and a cultural shift for the land development industry.

### **Challenges**

#### **1. Technology**

The identification of an appropriate vehicle for transmission of files and also a common denominator for the many CAD software packages and their versions, used in the preparation of plans, has been a major challenge.

There was also the challenge of maintaining the security and integrity of these electronic files while in transmission.

ePlan has been in the pilot testing stage since August 1998 with a limited number of surveyors from various locations around the State and, more recently, the Roads and Traffic Authority, co-operating with LPI to test key technologies and to create a model for dealing with digital plan data.

#### **2. Legal Issues**

To achieve full electronic lodgment, alternatives to the current requirements for original signatures on the plan had to be identified.

Acceptance of a scanned image of the original signatures provides us with a short term, workable solution without changing existing practices or unduly increasing the risks. Sophisticated forms of electronic or digital signatures require access to specialised software, digitising pads and databases or third party, accredited suppliers of public key technology. Adoption of Public Key Infrastructure or Biometric Signature Verification technologies could not be economically justified in this case and would have severely limited access to the ePlan option.

### **Progress with the Pilot**

The Internet has been chosen as the transmission medium for remote lodgment.

A pilot project enabled us to determine the format in which digital plan data could be lodged. The data comprises three specific file types, the plan drawing, the plan geometry and an administrative file.

**1. The plan drawing file** is simply the plan, together with any sec.88B instrument or management statement, in an electronic format known as Tagged Image File Format (TIFF).

### **Why did we choose TIFF as the format standard?**

Although not included as a standard file export format by many computer aided drafting (CAD) packages, TIFF is an industry standard image file format used for the storage and transfer of image files between applications and across networks. TIFF is the format used to store and provide plan and dealing images from the LPI Document and Integrated Image Management System.

ePlan dovetails neatly with current trends in electronic service delivery. For example all local councils are now receiving newly registered plans in electronic format as TIFF images via the LPI Internet Delivery Service.

The TIFF image is a "snap shot" of the plan, as we know it now. The file maintains full integrity of the data when viewed in various imaging packages, unlike other standards currently used such as DXF, DWG or DGN which can be distorted or degraded to varying degrees when viewed in the different CAD packages.

The pilot has shown that the images produced directly from CAD packages will not be acceptable for lodgment of the final plan due to variation in quality and the inability to reproduce variations in line thickness.

An exciting development is the creation of TIFF images from various CAD applications using third party software in the form of a raster printer driver. The product being tested (PEERNET.DRV Pro Driver) has produced excellent images from Windows based files suitable for all plan and document types in the final form. VIEW COMPANION is a similar product suitable for DOS based software.

**2. The plan geometry file** is the bearings, distances and areas of all lots and other polygons in the final plan and is to be collected using a specified software package, which will be supplied free of charge to all surveyors.

A completed plan could be broken down into a series of four major polygons such as:

- a surround polygon
- road polygons (where new roads, pathways, road widening or closures occur)
- lot polygons and
- Permanent Mark polygons

The purpose of the geometry file is threefold.

- To provide surveyors with a quality check of the mathematics of the completed plan in order to satisfy the accuracy requirements of the Surveyors (Practice) Regulation 2001.
- To provide Land and Property Information New South Wales with evidence that the plan is accurate as to closes and areas and

- To facilitate automated update of the States' Digital Cadastral Data Base.

**The administrative file** is created as a result of entering data onto a lodgment screen on the website and provides the information necessary for the Integrated Titling System to create the current plan lodgment records, allocate plan numbers and forward invoices.

This file can also accommodate any survey report or comment by the surveyor to assist in the examination of the plan.

### **Where are we now?**

The clarity and integrity of the TIFF files received to date are of a standard that enables the production of quality hardcopies to permit plan examination and sale to clients.

Since October 1999 the remote lodgment of pre-examination plans and test data using the ePlan web facility has been available.

In August last year the ePlan pilot was extended to the acceptance for registration of Proposed Road Action plans lodged by the Roads and Traffic Authority. The RTA was invited to test the proposal for dealing with signatures as a lead up to the preparation of legislation.

Testing proved that acceptance of a scanned image of original signatures on a separate 'Signature Form' was workable and accordingly the Conveyancing Legislation Amendment (ePlan) Bill 2002 was drafted. The ePlan Bill passed through Parliament on 20 March 2002.

### **Main provisions ePlan legislation**

- The Bill provides the legal basis for the electronic lodging of plans and accompanying documents. It amends the Conveyancing Act, Real Property Act, Strata Schemes Freehold and Leasehold Acts and the Community Land Development Act.
- Requires other documents accompanying a plan to be lodged electronically except the Title Deeds, copies of court orders and certain other documents.
- Signatures, seals and certificates are required to be endorsed on an approved form for signatures to be lodged electronically with the plan.
- Before a surveyor or other authorised person can lodge a plan electronically, he or she must be approved by the Registrar General and obtain a user-id and password. Approval may be cancelled by the RG.
- The approved form for signatures can also be used for plans lodged manually.
- Documents bearing original signatures, eg approved form for signatures and 88B are to be retained by the lodging party for a specified period after the plan has been registered.
- Appropriate Regulations are to be drafted.
- Plans lodged by the RTA for proposed road action and registered as part of the pilot will be validated.

The various Regulations, which set out the full requirements for preparation and lodgment of the plan and accompanying documents, have been drafted and commenced on 1 August 2002.

## **The Model**

In recognition of the fact that the majority of surveyors have the capacity to operate in an electronic environment, we propose that the surveyor will adopt the role of a lodging agent.

In order for LPI to maintain a manageable group of parties with the authority to lodge plans and at the same time retain a secure lodgment site, the surveyor is seen as the most appropriate lodgment agent for both the plan and accompanying documents. Following subdivision or strata approval by the local council and as directed by the client the surveyor can lodge the plan electronically at LPI.

It should be noted that the use of ePlan will be voluntary, the ability to lodge a plan manually will remain.

## **Why the Surveyor?**

- Existing professional registration requirements for surveyors and relative small size, 1200, of this group make it administratively manageable
- LPI currently maintains a database of address details for all surveyors registered in NSW
- Continuous carriage of plan for life (responsible for any future amendments required to the plan)
- Security (website password login/ direct lodgment from surveyor to LPI)
- Stakeholder (involvement with other stakeholders as project manager of the development)
- Reduces risk of possible fraud (dealing with a reputable, registered professional)
- One point of contact (requisitions/notices, surveyor would liaise with solicitor in respect of requisitions of a legal nature)
- Known technology capability.

Under the proposal, the current working relationship between the owner, solicitor and surveyor in land development would not change. The solicitor, acting on behalf of the owner in conjunction with the surveyor and local council, designs and prepares any s.88B instrument, development statement and management statement. The plan, as prepared by the surveyor, reflects the approved development.

## **Signatures**

It is proposed that existing development and approval processes will remain the same. However, instead of collecting the signatures and consents on the original plan, the original signatures of all parties, as well as the original certification of the General Manager/Accredited Certifier/Authorised Person and Surveyor will be obtained on an Approved Plan Form specifically for signatures.

The Signature Form would then be scanned by the surveyor using a standard A4 scanner, with specified settings, and lodged electronically with the plan as a TIFF image.

A draft of the proposed Signatures Forms – see Plan Form 6 and Plan Form 6A.

### **Production of the Certificate of Title (CT)**

It is proposed that the plan will not be registered until the Certificate of Title is produced.

The infrastructure for title production (usually by lending institutions) is well established and retention of this requirement, in the short term, is not seen as an impediment to the introduction of full ePlan.

### **Processing in LPI**

Following examination, LPI will add administrative data such as the registration date and seal and titling details before the image is stored in the imaging system.

### **The future**

Finally, a word on the future in an ePlan environment.

The plan, as a pictorial representation of our most valuable asset, land, will continue to play a key role in conveyancing. Moving to ePlan is a challenge which represents a significant break from the 130 year old plan lodgment system which has served NSW so well. It is a step we must take to ensure continued efficiency of the plan lodgment process by taking advantage of the latest technology.

The amalgamation of the core land information providers will provide enormous potential for the Government Business Enterprise, Land and Property Information New South Wales, to re-focus service delivery by linking titling, valuation and mapping services and concentrating on electronic lodgment, processing and information service delivery.

Upon commencement of the Regulations, implementation of the ePlan facility for privately lodged plans will be progressive to balance development of internal LPI business systems to minimise manual intervention. This model is presented for the information of all parties involved in the subdivision process.

Comments and enquiries can be directed to the ePlan project team.