

# **Bureau of Land Management Geographic Coordinate Database (GCDB) Publication Point IDs**

January 2006

## **Introduction**

This paper describes a standard point identifier for corners identified in the Bureau of Land Management's (BLM) Cadastral Survey Geographic Coordinate Database (GCDB). This standard point identifier conforms to the requirements of the Federal Geographic Data Committee (FGDC) Cadastral Data Content Standard requirements for a unique identifier for cadastral corners. The standard system presented here allows published coordinate information to be related to source data and to perpetuate corner identifiers as coordinate values for corners are improved over time.

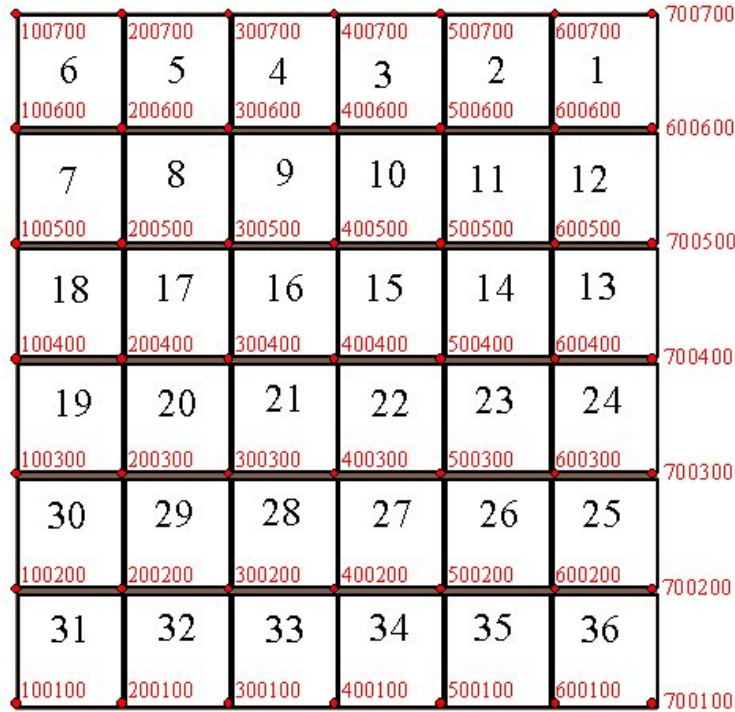
The uniqueness of the survey point IDs will help facilitate data maintenance and data sharing within the BLM and with external agencies. This paper describes the format and structure of the corner point identifiers for the publication of corner information from the BLM that conforms to the national cadastral data standards.

## **PLSS Points**

The Geographic Coordinate Data Base (GCDB) uses a six-digit numbering system to name PLSS points in a township. This six-digit corner number is only unique within a PLSS township. This number is repeated in each township, to make it easier to determine the location of a corner within a Township by its number.

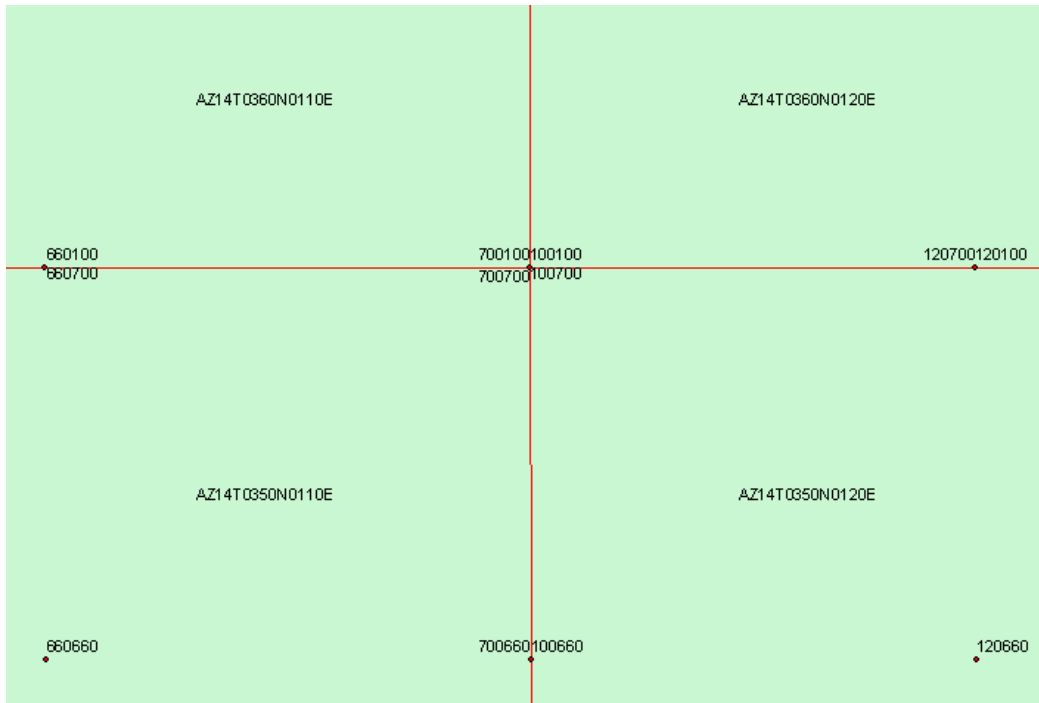
The first three digits of this number refer to the east-west position in the township. The second three digits indicate the north-south position in a township.

The following picture shows the corner numbering convention for a single township subdivided down to sections. This numbering scheme is repeated in each township.



Due to this naming convention, four adjacent townships will name the same corner four different ways (100100, 100700, 700700, 700100). Each corner number should have the exact same coordinate values because this is in fact the same corner.

The following picture shows an example of the point duplication at township corners and township lines where sections subdivisions are coincident.



### Unique PLSS Corner Numbers

To make the corner numbers unique, the proposal is to add a point prefix to the PLSS corner number. This prefix is a concatenation of the State, Principal Meridian, Township and Range in which the point resides. This point prefix can be derived from the directory structure of the output directory from the BLM’s Data Preparation Software (DCCS V 1.04) and is a standard 15 characters long. This identifier has been termed the township identifier or TWIP in other systems.

The uniqueness is established by making a business rule that the lowest six digit corner number will become the primary number and all other numbers will become aliases or other corner numbers for the same corner. The following diagram shows the proposed corner numbering convention.

