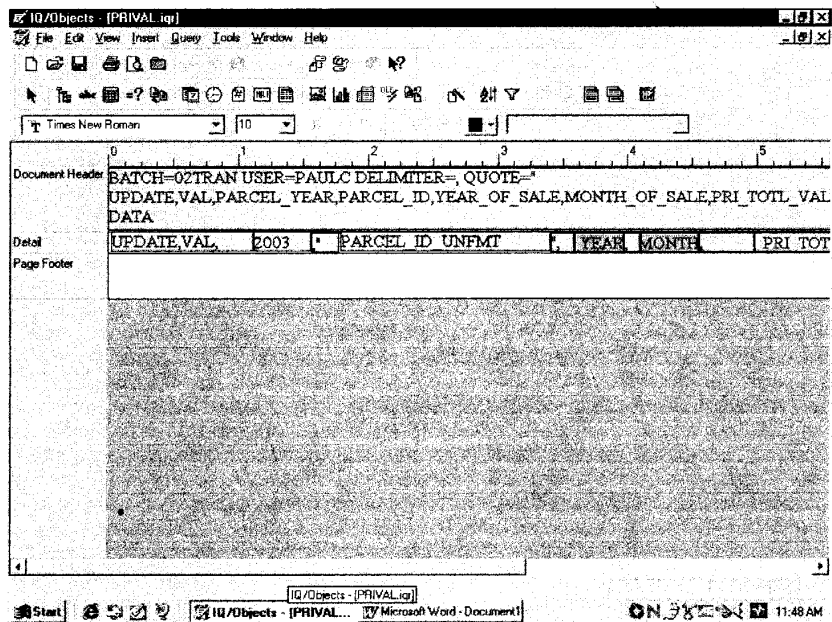


BATCH=02TRAN USER=PAULO DELIMITER=, QUOTE="

UPDATE,VAL,PARCEL_YEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,PRI_TOTL_VAL
DATA
UPDATE,VAL,2002,"9990010000000010",0,0,198100



Thurston Version (1/10/97) - PRELIMINARY

This document describes the format of the transaction file used by the relational version of the Sicma Batch Update Facility. The transaction file, along with Batch DMT, is used to modify the CAMA Database.

The transaction file consists of four record types. Each of these record types has a specific function designed to instruct Batch DMT in how to process the transaction file.

PROGRAM OPTIONS - The Program Options Record contains global instructions which are used to direct Batch DMT in the overall processing of the transaction file.

HEADER RECORDS - Each Header Record contains the transaction type, which is the type of action to be taken (e.g., update or insert), the table to be acted upon (PARCEL, LAND, RESIDENCE, etc.), and the list of fields to be updated.

SEPARATOR RECORD - The Header Records and the Data Records are separated by a record containing the word "DATA".

- **DATA RECORDS** - The Data Records use the same format as the Header Records, except that instead of the field names being listed out, as in the Header Records, the actual data will be used.

A simple example of a complete transaction file is shown below:

BATCH=TEST USER=ABC DELIMITER=, QUOTE=" COMMIT=PID	(PROGRAM OPTIONS
RECORD)	
UPDATE, PAR, PARCEL YEAR, PARCEL-ID, YEAR OF-SALE, MONTH OF-SALE, PROP-ST NAM	
(HEADER RECORD)	
DATA	(SEPARATOR RECORD)
UPDATE, PAR, 1994, "01010100001", 0000, 0, "DANNY THOMAS BLVD"	(DATA RECORD)

PROGRAM OPTIONS - KEYWORDS & FORMAT

The Program Options Record is always the first record in the transaction file. The Program Options Record contains program options of the form KEYWORD=VALUE. The keyword/value combinations are separated by spaces. There is no specific order in which the options must appear. Only the first two characters of the keyword are required. Below is a description of the options.

- BATCH=<program name or other name>

This option is used to identify the program or process which created the transaction file. This option is required.

- USER=<user name>

This option is used to identify the person who is creating the Batch Transaction File. This is not required.

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REPORT = ERR, WARN, or ALL

This option instructs Batch DMT as to the type of report to create.

- The ERR option will only report on any serious errors found while processing. Serious errors would include updates for data not found in the database, or inserts for data already existing. Usually such errors will result in no update being made to the database. REPORT = ERR is the default.
- The WARN option will report serious errors and warnings. Warnings are primarily field level errors, such as range, value or cross-edit errors. Such errors will not prevent the transaction from being applied.
- The ALL option will report on all transactions processed, whether they are in error or not.

• COMMIT = PID, ALL, <number>, or NONE

This option is used to instruct Batch DMT when and/or how often to COMMIT (save) the changes being made by the Batch DMT run.

- The PID option instructs Batch DMT to save the changes every time a new parcel is read. This option is the default.
- The ALL option instructs Batch DMT to save the changes after the entire transaction file has been processed.
- The <number> option will save the changes for every <number> of parcels processed or until the end of the transaction file has been reached.
- NONE will result in no changes being saved. This is very useful when testing a transaction file.

• PID=UorF

This option specifies whether formatting characters will be used in the Parcel ID field in transactions.

- The U option indicates that unformatted Parcel IDs will be used. This option is the default.
- The F option should be used when the standard formatting characters will appear in the Parcel ID field.

• EDITS = Y or N

This option specifies whether field edits will be performed. Field edits include range, value, required field, and cross edits.

- The Y option indicates that edits will be performed. This option is the default.
- The N option indicates that the edits will not be performed. Sigma does not recommend setting this option. If it is for Sigma use only.

• DELIMITER = <delimiter char>

The Delimiter option is used to specify the character that will be used to separate fields on the Header Record and Data Record. If the Delimiter option is not used, Batch DMT will use the ',' character as the default value.

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QUOTE=<char>

This option is used to specify the type of character that will be used for quotes around character data. The default for this option is the double quote character (").

An example of an Option Record is shown below.

BATCH=TEST USER=SIGMA REPORT=ERR COMMIT=PID DELIMITER=, QUOTE=

In this case the name is "TEST" being run by SIGMA. The transaction report will show errors only. The changes are saved each time a new parcel is read. Commas will be used to separate fields and quotes will be used around character data.

HEADER RECORD FORMAT

The Header Record(s) must follow the Program Options Record. Multiple Header Records may be used for processing multiple tables in a single Batch DMT run. The format for the Header Record is shown below:

Real Property

Transaction Type (described below) Table Abbreviations (see Table 1 below) PARCEL YEAR PARCEL ID YEAR-OF-SALE MONTH-OF-SALE RECID1 (if required) RECID2 (if required) The names of the fields receiving values. (See column list for exact field names).

The above entries must be separated by commas, or by some other delimiter as specified by the DELIMITER option as described above. A sample header record is shown below:

INSERT,PAR,PARCEL YEAR,PARCEL_ID,YEAR OF _SALE,MONTH OF _SALE,ACTIVE,OWNER

Inter-Table Relationships

In order to understand how the various Batch DMT functions work, it is necessary to understand the "Parent-Child" relationships between tables. A "Parent" table is the main table and all "Child" tables are dependent on the existence of the "Parent" table. Generally, there is a one to many relationship between the "Parent" table and the "Child" table. One to many means that for every row in the "Parent" table there can be one or more associated rows in the "Child" table. These two tables are linked together by the Parcel ID. It is especially important to understand this relationship when using the delete or copy transaction types. When deleting or copying rows from a "Parent" table, all rows associated with the "Child" tables will also be copied or deleted. For example, if a LAND record is deleted then all of the LAND-INFLUENCE records associated with that LAND record will also be deleted.

Table 1 lists of all tables and the parent of each for the Real Property databases. Note that only the PARCEL table does not have a parent.

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Table Name	Abbreviation	RECID1 Parent Table	RECID2 Req'dReq'd		
PARCEL	PAR	N	N		
VALUATION	VAL	PARCEL	N		
APPRAISAL	APP	PARCEL	N		
APPRAISAL ADJ	APD	APPRAISAL	Y	N	
LAND	LND	PARCEL	Y	N	
LAND-INFLUENCE	LIN	LAND	Y	Y	
CROP	CRP	LAND	Y	Y	
RESIDENCE	RES	PARCEL	Y	N	
MOBILE-HOME	MOB	PARCEL	Y	N	
COMM-SECTION	CMS	PARCEL	Y	N	
COMM-AMENITY	CMA	COMM_SECTION	Y	Y	
COMM-GROUP	CMG	COMM_SECTION	Y	Y	
INCOME-SUMMARY	INS	PARCEL	N	N	
INCOME-DETAIL	IND	INCOME_SUMMARY	Y	N	
DET_STRUCTURE	DET	PARCEL	Y	N	
BLDG PERMIT	BPR	PARCEL	Y	N	

Table 1 - Real Property Inter-Table Relationships

Transaction Types

The Transaction Type indicates the type of action to be taken, and may have one of the values shown below.

- INSERT - Add a new row to the specified table
- DELETE - Delete a row from the specified table. Be careful when deleting rows that have child tables. The corresponding rows in the child tables will also be deleted even though they were not specified in the transaction. Note that there are no data fields associated with this type of transaction.
- UPDATE or UPDATE+ - Update value(s) in field(s) on an existing row. If UPDATE+ is used, then a new row will be created if the row specified does not exist.
- COPY or COPY! - Copy the specified row to (or from) another row. If COPY! is used, then existing rows will be overwritten.

In order to fully understand how COPY and COPY! work it is essential to understand the two types of child tables. One is a "supporting" child table and the other is a "detail" child table.

The supporting tables usually contain only a few pieces of data which augment the parent and can occur multiple times. These can be thought of as an extension of the parent table and subject to the same treatment as the parent in most cases. An example of a supporting table is the Land Influence table associated with the Land table. Supporting tables will not have children of their own.

The detail children contain descriptions of the various entities which make up its parent. For example, the LAND and RESIDENCE have a detail child relationship with the PARCEL table. Detail tables may have children of their own. For example, the LAND

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table has the LAND INFLUENCE table for a child.

This is a list of all supporting tables. The data in these tables will automatically be copied when the parent table is copied.

LAND-INFLUENCE
• COMM-AMENITY

- COPYALL or COPYALL! - Copies a specified row and its children, both detail and supporting. If COPYALL! is used, then existing rows will be overwritten.

Table Abbreviations

This field must contain a table abbreviation chosen from the list in Table 1. Table Abbreviations are used to identify the table to Batch DMT. Table 1 also shows whether RECID1 and RECID2 are required.

SEPARATOR RECORD

The record immediately following the Header Record(s) must be a Separator Record, containing the word "DATA". This record must follow all Header Records and precede all Data Records.

DATA RECORD FORMAT

The format for the Data Record must correspond to the Header Record, except instead of field names the actual data updating the database will be used. If multiple Header Records are being used, then multiple corresponding Data Records must also be used.

- Transaction Type (Same requirements as described for Header Record)
- Table Abbreviation (Same requirements as described for Header Record)
- PARCEL YEAR (use 0 for Sales Records)
- PARCEL_ID
- YEAR-OF-SALE (use 0 for Inventory Records)
- MONTH-OF-SALE (use 0 for Inventory Records)
- RECID1 - used to identify multiple occurrences of the same table within Parcel ID.
- RECID2 - used to identify multiple occurrences of child tables within Parcel ID. RECID1, of the child table, should be the same as RECID1 of its corresponding parent table. RECID1 and RECID2 are required for certain tables. Table 1 shows when RECID's are required for each specific table.
- Data Fields - Values for the field names specified on the corresponding Header Record. These must be in the exact same order as the fields on the header. Each Data Field must be separated by the chosen delimiters. Any field containing embedded spaces or the delimiter character must be enclosed in quotes. For both delimiters and quotes, use the characters specified in the Program Options Record. Fields with no value should be left empty, ie, ' ' or ' , ' or ' NULL '.

TRANSACTION FILE EXAMPLES

1. INSERT examples.

Here are two INSERT examples. The first example adds parcel 01-01-01-00001 to the database with a "1" in the Roll Type field and an Street Name of "WAHLENS PLACE". The second example shows two parcels being added to the database, each with associated Land records putting a value in the SOIL CLASS field.

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Example 1

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE="
INSERT, PAR, PARCEL_YEAR, PARCEL_ID, YEAR_OF_SALE, MONTH_OF_SALE, ROLL TYPE, PROP_ST NAM
DATA
INSERT, PAR, 1994, "01010100001", 0000, 0, 1, "WAHLLENS PLACE"
```

Example 2

```
BATCH--TEST USER=ABC DELIMITER=, QUOTE="
INSERT, PAR, PARCEL_YEAR, PARCEL_ID, YEAR_OF_SALE, MONTH_OF_SALE, ROLLTYPE, PROP_ST_NAM
INSERT, LND, PARCEL_YEAR, PARCEL_ID, YEAR_OF_SALE, MONTH_OF_SALE, RECIDI, SOIL CLASS
DATA
INSERT, PAR, 1994, "02010300123", 0000, 0, 1, "GJAHLLENS PLACE"
L~-SERT, LND, 1994, "02010300123", 0000, 0, 0001, 1
INSERT, LND, 1994, "02010300123", 0000, 0, 0002, 6
INSFR1, PAR, 1994, "05011200201", 0000, 0, 1, "TURNABOUT LANE"
INSERT, LrdD, 1994, "05011200201", 0000, 0, 0001, 6
```

2. DELETE examples.

Here are two DELETE examples. In both examples all transactions will be reported on, as opposed to Error transactions only and use the formatted Parcel ID. The first example shows the Parcel ID "21-05-10-03004" being deleted from the database. It is important to note that database fields are not specified. Also note that the Recid is also not specified. This is because the Recid is not a required field for the PARCEL Table (See Table 1). In fact, there is no such field. Also keep in mind that all "detail" and "supporting" child tables will be deleted.

The second example is similiar to the first, except only the LAND record will be deleted. In this case any supporting tables, such as LAND-INFLUENCES, will also be deleted. Note that Recidl is required.

Example 1

```
BATCH--TEST USER=ABC DELIMITER=, QUOTE=" PID=F REPORT=ALL
DELETE, PAR., PARCEL_YEAR, PARCEL-ID, YEAR-OF-SALE, MONTH OF-SALE
DATA
DE=.ETE, PAR, 1994, "21-05-10-03004", 0000, 0
```

Example 2

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE=" PID=F REPORT=ALL
DELETE, LND, PARCEL_YEAR, PARCEL_ID, YEAR-OF_SALE, MONTH OF_SALE, RECIDI
DATA
DELETE, LND, 1994, , 21-04-67-17893", 0000, 0, 0001
```

3. UPDATE / UPDATE! Examples

Here are two UPDATE examples. The first example shows SQUARE-FEET on the LAND record being updated with 12000 and VALUE _METHOD being updated with "S". The second example shows the LAND record and the LAND _INFLUENCE record being updated on the same transaction file. The SQUARE _FEET is being updated on the LAND record and the INFLUENCE is being updated on the LAND-INFLUENCE record.

Relational Transaction Format - Thurston Version

Example 1

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE=" REPORT=ALL
UPDATE,LND,PARCEL_YEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,RECIDI,SQUARE_FEET,VALUEM
ETHOD
DATA
UPDATE,LND,1994,21051040003,0000,0,0001,12000,5
```

Example 2

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE="
UJDATE,LND,PAP.CEL YEAR,PARCEL ID,YEAR OFSALE,MONTH OF_SALE,RECID1,SQUAREFEET
UPDATE,LIN,PARCEL_YEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,RECID1,RECID2,INFLUENCE
DATA
UPDATE,LND,1994,21051040003,0000,0,0001,12567
iJDATE,LIN,1994,21051040003,0000,0,0001,0001,EA
UPDATE,LIN,1994,21051040003,0000,0,0001,0002,FZ
UPDATE,LIN,1994,21051040003,0000,0,0001,0003,LL
U?DATE,,:JD,1994,21051040003,0000,0,0002,43560
JPDA:E,LIN,1994,21051040003,0000,0,0002,0001,XS
```

4. COPY / COPY! Examples

Here are 2 COPY examples. In both examples notice the keyword "FROM-TO" on the Header record. The "FROM-TO" keyword is unique to copy transactions. Its corresponding field in the Data record is "FROM" or "TO". This indicates which parcel will be the "Copy From" parcel and which parcel will be the "Copy To" parcel.

The first example shows the RESIDENCE record of parcel "21-05-10-03004" being copied "FROM" the RESIDENCE record of parcel "21-05-10-00003". The second example shows the second Residence of parcel "21-05-10-03004" being copied "TO" the RESIDENCE Record of parcel "21-05-10-00003". The "!" indicates that the record will be overwritten, if it already exists. Also note that in both examples the Header Record is shown as being on 2 lines. In actuality only one line should be used.

Example 1

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE=" REPORT=ALL
COPY,RES,PARCEL_YEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,RECIDI,FROM-TO,PARCEI,_YEAR,P
ARCEL ID,
YEAR_OF_SALE,MONTHOF_SALE,RECIDI
DATA
COPY,F,ES,1994,21051003004,0000,C,C001,FR.OM,1994,21051000003,0000,0,0001
```

Example 2

```
BATCH=TEST USER--ABC DELIMITER=, QUOTE=" REPORT=ALL
COPY!,PAR,PARCEL_YEAR,PA.RCEL_ID,YEA-R_OF_SALE,MONTH_OF_SALE,RECID?,FROM-TO,PARCEL YEAR,
PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE RECIDI
DATA
COPY!,RES,1994,21051003004,0000,0,0001,TO,1994,21051000003,0000,0,0001
```

5. COPYALL / COPYALL! Examples

Here are **2 COPYALL examples**. Both examples are copying parcel 21-05-10-03004 to parcel 21-15-20-05020. The second example uses the "!" feature. This means that any existing parcels will be overwritten.

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Example 1

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE=" REPORT=ALL
COPYALL,PAR,PARCELYEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,RECIDI,FROM-TO,
PARCEL_YEAR,PARCEL_ID,YEAR OF-SALE, MONTH OF_SALE,RECIDI
DATA
COPYALL,PAR,1994,21152005020,0000,0,0001,FROM,1994,21051003004,0000,0,0001
```

Example 2

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE=" REPORT=ALL
COPYALL,PAR,PARCEL_YEAR,PARCEL_ID,YEAR_OF_SALE,MONTH_OF_SALE,RECIDI,FROM-TO,
PARCEL_YEAR,PARCELID,YEAR OFSALE,MONTH OF_SALE,RECIDI
DATA
COPYALL,PAR,1994,21152005020,0000,0,0001,FROM,1994,21051003004,0000,0,0001
```

SPECIAL FEATURES

Enhanced Table Abbreviation

It is possible to update different fields in the same table using multiple transaction records. The way to do this is to make use of characters 4 through 6 in the Table Abbreviation Field.

The first 3 characters in the Table Abbreviation Field are used to identify the table name as previously discussed and shown in Table 1. Characters 4 through 6 are used to uniquely identify transactions updating the same table. This gives one the ability to update different fields without having to list all the fields on the same transaction record. This is most helpful when updating many fields on the same table and not being able to list all of the fields on the same transaction record or when fields are to be updated conditionally. The following example illustrates this. Note that parcel 21-05-10-03004 will be updated for all three fields while parcel 21-16-01-07009 will only have its ASMT_CLASS field changed.

```
BATCH=TEST USER=ABC DELIMITER=, QUOTE="
UPDATE,PAR1,PARCEL_YEAR,PARCEL_ID,YEAR OFSALE,MONTHOFSALE,ASMTCLASS
UPDATE,PAR2,PARCEL_YEAR,PARCEL ID,YEAR OF SALE, MONTH OF_SALE,SALE PRICE
UPDATE,PAR3,PARCELYEAR,PARCEL_ID,YEAR_OF_SALE,?FONTH_OF_SALE,SALE TYPE
DATA
UPDATE,PAR1,1994,21051003004,0000,O,CA
UPDATE,PAR2,1994,21051003004,0000,O,75000
UPDATE,PAR3,1994,21051003004,0000,O,D
UPDATE,PAR1,1994,21160107009,0000,O,CT
```