

# Merging Projects in Detail

Sometimes you'll want to understand just exactly how Merge handles your data records. This chapter covers Merging in detail: record keys, sequencing and rules, and algorithms. It is not necessary to fully understand these rules to merge successfully; sometimes it is helpful to understand them generally to be comfortable with the results, or to guide the process more explicitly.

## Unique & Duplicate Records

Merge operates by comparing individual records in the existing dataset, or project, with individual records in the merge project. For each record being imported or merged into the main project, **Auction!** compares its unique key to the keys in the existing main project.

If the keys are even slightly different, **Auction!** will add the new record to the main project.

If the keys are identical, **Auction!** uses your Control Option selections, as well as date/time stamps recorded internally on each individual record to decide what information will be stored in the main project.

### Caution

**Merge is always additive.** When you delete a record in one copy of a dataset, and it has been retained in another dataset, it **will reappear** after merge.

*To delete records permanently, the record must be deleted in all copies of the data, or after merging to a consolidated dataset that will be restored from backup to other machines.*

Record Types	Key Fields determining Uniqueness of Record
Name	Company Name & Last Name & First Name & Additional Last Name & Additional First Name
Item	Item Type & Item Number
Ticket Types	Ticket Name & Number of Seats & Cost
Reservation	Name of Guest & Date/Time Recorded (if both are active)
Pledges	Name of Guest & Item & Amount & Date/Time
Payments	Name of Guest & Amount & Method & ID # & Expiration & Date/Time Recorded

## How Does Merge Work?

**Auction!** evaluates each record to determine if it is unique. Unique names and items in the merge are simply added to the open project. When a record is not unique, based on the key fields in Record Key Fields, the merge for that record is handled by the Merge Rules below.

### Sequence:

**Names** are compared and merged first, so **Items** and **Transactions** associated with Names may be merged correctly.

**Items** are merged next.

**Transactions** are associated with Names and Items, so Transactions are merged last. Within Transactions, **Ticket Types**, then **Reservations**, and finally **Payments** and **Pledges** are merged in sequence.

## Name Merge

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When you merge, resulting records in your **Existing (open)** project reflect your merge control options, and the date/time stamps of **Existing** and **Merge** copies of records. The **Merge** project records are never modified.

When you select **Join**, additional information in the merge project record is *added* to the existing project record, even when the existing project record is newer. When a merge record is newer, non-blank fields will also update existing data in the main project record. Blank fields in the merge record will *not* update or overwrite older data when you've selected the Join option.

When you select the **Replace** option, only the newest copy of the record will be retained.

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### Tip

*When merging before your event, you may choose either join or replace, depending on how you and your teammates are entering data.*

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When Name, Item or Transaction records in the Merge project are unique, they are simply added to Existing (open) project. When records are duplicate, then Merge rules are applied to determine the characteristics of the record after merge. See **Unique & Duplicate Records**.

Merge result examples are shown in the following tables.

## Name Merge Special Cases

**Invitee/Donor Status:** The result of merging **Invitee** and **Donor** for a name is always **Invitee/Donor**.

**Bid Number:** **Auction!** makes every attempt to retain all bid numbers during merge. The process involves a number of distinct cases. While these cases are handled in a specific sequence in the software, the results also depend on the sequence in which records were added to the dataset, and which bid numbers were assigned. Any errors in the merge log should be reviewed carefully.

When a name record, including its bid number, can be brought in without conflicting with its bid number in the open dataset or another guest's existing bid number, the bid number is retained.

When a guest has different bid numbers in the two datasets (including blank as a value,) extensive checking occurs. **Auction!** determines the newest record date/time stamp. When newer, incoming names use a bid number already in the open dataset, the incoming bid number for these names is set to blank.

When matched to an existing name, the record may receive a new bid number or have bid number set blank, depending on bid numbers already in use. An error is noted in the merge log.

All errors require correction to assure winning bids can be entered for every bidder.

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### Tip

*Prevent errors by assigning bid numbers in one copy of the dataset, and modifying bid numbers only after merging to a consolidated dataset.*

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**Number Attending:** Zero is always replaced by non-zero values. When values are non-zero and differ, the newer record's information is retained.

**Entrée Selections:** Specified choices are retained when the other record has none selected.

**Name Merge Table (Existing Record Newer)**

Existing Record <b>Newer</b> (30 April 2005 09:15), Merge Record <b>Older</b> (29 April 2005 19:45) Company & Last Name & First Name & Additional Last Name & Additional First Name are an exact match				
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join Result	Replace Result
Conventional Handling under Join/Replace Rules				
Address	391 Main Street		391 Main Street	391 Main Street
City		Lamar	Lamar	
State	CO	CO	CO	CO
Phone	719 335-1201	719 674-7988	719 335-1201	719 335-1201
Same techniques for all other fields except special cases noted below.				
Special Cases for Join/Replace Rules				
Invitee/Donor Status	Invitee	Donor	Invitee/Donor	Invitee/Donor
Invitee/Donor Status	Donor	Invitee	Invitee/Donor	Invitee/Donor
Bid Number	208		208	208
Bid Number		208	208 if available, error in log if already in use.	208 if available, error in log if already in use.
Bid Number	172	208	172	172
Number Attending	2	0	2	2
Number Attending	0	2	2	2
Number Attending	1	2	1	1
Entrée Selections	None selected	One Beef, one Chicken	One Beef, one Chicken	One Beef, one Chicken
Entrée Selections	Two Beef	One Beef, one Chicken	Two Beef	Two Beef

**Name Merge Table (Merge Record Newer)**

Existing Record <b>Older</b> (22 April 2005 09:15), Merge Record <b>Newer</b> (29 April 2005 19:45) Company & Last Name & First Name & Additional Last Name & Additional First Name are an exact match				
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join Result	Replace Result
Conventional Handling under Join/Replace Rules				
Address	391 Main Street		391 Main Street	
City		Lamar	Lamar	Lamar
State	CO	CO	CO	CO
Phone	719 335-1201	719 674-7988	719 674-7988	719 674-7988
All other fields except special cases noted below.				
Special Cases for Join/Replace Rules				
Invitee/Donor Status	Invitee	Donor	Invitee/Donor	Invitee/Donor
Invitee/Donor Status	Donor	Invitee	Invitee/Donor	Invitee/Donor
Bid Number	208		208	208
Bid Number		208	208 if available, error in log if already in use.	208 if available, error in log if already in use.
Bid Number	172	208	208 if available; if already in use, then an error is noted in the log and bidder retains 172	208 if available, error in log if already in use.
Number Attending	0	2	2	2
Number Attending	2	0	2	2
Number Attending	1	2	2	2
Entrée Selections	None selected	One Beef, one Chicken	One Beef, one Chicken	One Beef, one Chicken
Entrée Selections	Two Beef	One Beef, one Chicken	One Beef, one Chicken	One Beef, one Chicken

## Item Merge

Items are compared next. **Join** and **Replace** options work similarly to Names. See Item Merge Tables for details. As with Names, there are special cases in addition to general handling of duplicate records.

### Item Merge Special Cases

**Baskets:** When you have an item with the same type and number in the Main and Merge projects, except that one is a basket or “container”, and the other is a standard item, a special exception is made. In all cases, this item will become a basket/container after the merge. This will occur regardless of date/time stamp and merge control options.

This handling is designed to prevent “orphan” or “floating” basket component items associated with the basket. It will ignore the donor name associated with the standard item, and will retain associated basket component items, whose donors are reflected on the basket assembly.

**Pledge / Multiple Buyer Items:** The Pledge/Multiple Buyer selection overrides standard item status whenever pledge bids exist. This assures a maximum of one bid would need to be re-entered after merging, and this bid is noted in the merge log.

When there are items in the Main and Merge Projects with the same Item Type & Number, and one is a Pledge or Multiple Buyer Item, and the other is not, a special comparison is made.

When there are no winning bids for either project’s copy of the item, the item is saved as a **Pledge/Multiple Buyer or Standard item**, whichever is newer. If this is not the desired status, you can correct it after merging.

When there is a winning bid(s) for one of these copies of the item, the copy of the item with the winning bid(s) takes precedence, and determines the items’ status.

### Item Merge Table (Existing Record Newer)

Existing Record <b>Newer</b> (28 April 2005 08:26), Merge Record <b>Older</b> (26 April 2005 15:53) Item Type & Item Number are an exact match				
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join Result	Replace Result
<b>Conventional Handling under Join/Replace Rules</b>				
Short Description	Dinner at The Grill	\$50 at the Grill	Dinner at The Grill	Dinner at The Grill
Donor Value		\$50	\$50	
Category	Dining Out		Dining Out	Dining Out
Donor Name	Kenzay, Bob & Kerri	The Grill Restaurant; Kenzay, Bob & Kerri	Kenzay, Bob & Kerri	Kenzay, Bob & Kerri
Winning Bid		\$55	\$55	\$0
All other fields except special cases noted in <i>Item Merge Special Handling Table</i>				

### Item Merge Table (Merge Record Newer)

Existing Record <b>Older</b> (23 April 2005 12:32), Merge Record <b>Newer</b> (26 April 2005 15:53) Item Type & Item Number are an exact match				
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join Result	Replace Result
Short Description	Dinner at The Grill	\$50 at the Grill	\$50 at the Grill	\$50 at the Grill
Donor Value		\$50	\$50	\$50
Category	Dining Out		Dining Out	Dining Out
Donor Name	Kenzay, Bob & Kerri	The Grill Restaurant; Kenzay, Bob & Kerri	Kenzay, Bob & Kerri	The Grill Restaurant; Kenzay, Bob & Kerri
Winning Bid	\$55		\$55	
Same techniques for all other fields except special cases noted in <i>Item Merge Special Handling Table</i>				

### Item Merge Special Handling Table

Special Cases for Join/Replace Rules (Either record is Newer)				
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join Result	Replace Result
Basket Container status	Getaway Weekend (standalone item), donated by Jones Family	Getaway Weekend (BASKET)	Getaway Weekend (BASKET) donors only from component items	Getaway Weekend (BASKET) donors only from component items
Pledge/Multiple Buyer status for item	Pledge/Multiple Buyer item, no bids placed	Standard (one bid) item, no bid placed	Standard item or Pledge/Multiple Buyer item, whichever is the newer record.	
Pledge/Multiple Buyer status for item	Standard (one bid) item, no bid placed	Pledge/Multiple Buyer item, one or more pledge bids placed	Pledge/Multiple Buyer item, pledge bids retained	Pledge/Multiple Buyer item, pledge bids retained
Pledge/Multiple Buyer status for item	Pledge/Multiple Buyer item, no pledge bids placed	Standard (one bid) item has winning bid of \$600	Standard item with winning bid of \$600	Standard item with winning bid of \$600
Pledge/Multiple Buyer status for item	Standard item, winning bid of \$600	Pledge/Multiple Buyer item, one or more pledge bids placed	Pledge/Multiple Buyer item, pledge bids retained, single bid of \$600 deleted, error noted in merge log	Pledge/Multiple Buyer item, pledge bids retained, single bid of \$600 deleted, error noted in merge log

## Transaction Merge

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Transactions encompass four different types of information. Transactions are unique in that they may not be deleted. While they cannot be deleted, they can be intentionally dropped when transferring data to a new project.

Transactions are Active or Voided (Cancelled) and are always retained. Due to the nature of transactions, Merge Control options are not applicable during merge. Due to the nature of transactions, “older” and “newer” also do not apply.

### Ticket Types:

When Ticket Types match, **Auction!** compares the Active/Cancel (Void) flag. When one copy of the ticket type is Active and the other copy has been Voided, it checks to see if there are any tickets of this type sold and still active.

When this ticket type has been sold in either dataset, the ticket type will be forced to Active in the main project. If no tickets of this type have been sold, and one or more of the ticket type records has been cancelled, then the ticket type will be forced to Void.

### Reservations:

Under normal circumstances, a guest may have no more than one active reservation. When a guests’ reservation has been independently recorded in two different datasets, they will be different, and **Auction!** will not attempt to decide which is correct. When both are Active reservations, Merge will warn you about the duplicate, and offer you the opportunity to Void (Cancel) one of them. If you skip this step, it will be offered each time you open the project until the extra reservations have been cancelled. If you review the reservation information for the owner of the reservation, you will only see the “first” copy the project has on record, except in the Transaction Grid view.

When a reservation is identical, and has been cancelled in either the merge project or main project, it will be forced to cancelled (voided) in the main project.

### Pledge Bids / Bids for Multiple Buyer Items:

When a Pledge bid matches in the Main and Merge projects, the Active/Cancel (Void) status is checked. Void always takes precedence and is retained as voided. When there are two or more Active bids for the same guest, for different amounts or recorded at different times, both bids are retained in the Main project, since the guest may have made two different pledges.

### Payments:

When Payments are an exact match, the Active/Void (Cancel) status is checked. Void always takes precedence and the payment is retained as voided. When there are two or more active payments for the guest, all payments for that guest are retained.

### Transaction Merge Table

Transaction Records Older/Newer not applicable. Join/Replace not applicable. Existing/Merge Record distinction not applicable.			
Field Name	Existing Record (open project)	Merge Record (inbound from floppy, USB flash drive or email)	Join/Replace Result
Ticket Type	Gold Sponsor Ticket Type Active, tickets sold	Gold Sponsor Ticket Type Void	Gold Sponsor Ticket Type Active, tickets retained
Ticket Type	Gold Sponsor Active, no tickets sold	Gold Sponsor Void	Gold Sponsor Void
Reservation	Jane Smith, purchased two tickets March 26, 2005	Jane Smith, purchased two tickets April 1, 2005	Both tickets retained, error message each time dataset opened until one copy is marked Void.
Pledge/Multiple Buyer Bids	Bob Allen pledged \$500 on Live Item 26	Bob Allen pledged \$500 on Live Item 26, marked Void	Bob Allen pledged \$500 on Live Item 26, marked Void
Pledge/Multiple Buyer Bids	Bob Allen pledged \$500 on Live Item 26	Bob Allen pledged \$250 on Live Item 26	Both bids retained, not identical
Pledge/Multiple Buyer Bids	James Marshall pledged \$400 on Live Item 26 at 8:00 pm	James Marshall pledged \$400 on Live Item 26 at 8:15 pm	Both bids retained, not identical (time is different)
Payment	Trudy Miller Visa Payment, \$400, June 8th, 2005, cancelled June 10th, 2005	Trudy Miller Visa Payment, \$400, June 8th, 2005	Trudy Miller Visa Payment, \$400 June 8th, 2005, cancelled June 10th, 2005