

PROPOSAL AGGREGATION SI4 VS. SI5

OVERVIEW

Item aggregation in the Proposal report presents some inherent differences between SI4 and SI5. This document seeks to highlight the differences, issues with the SI4 reports, how these issues are addressed in the SI5 version and the implications of aggregation of items in the SI5 Proposal.

To demonstrate the differences, I have created the a simple project in SI4 and SI5 and run the reports with the various settings ("Show Accessory Detail", "Hide Package Detail", etc).

This document focuses only on the "Detail" settings in the report as the "Keep Together" = False settings are handled via the line item report.

The goal of this document is to highlight these differences, educate all those effected internally and gain consensus on how we proceed with regard to the layout, presentation and new challenges presented.

I will focus on the differences in Equipment and Packages separately.

ITEM AGGREGATION IN SI4

As this document will demonstrate, SI4 has some severe limitations and implementation issues when it comes to aggregating items. In many cases, items are not grouped correctly or at all.

ITEM AGGREGATION IN SI5

To aggregate items in SI5, an "Item Hash" is created. This hash code is based on the manufacturer, model, and category of an item. Also considered when creating an item hash are the child items contained within the item.

For instance, two instances of a Sony receiver, model#123, category "receiver" with no accessories will have the same item hash. However, if one of the instances is accessorized with a pair of head phones, these two items will different item hash codes.

This difference allows us to aggregate completely similar instances of items and packages together and show the detail in line. This will be clarified in detail in the sections below.

DEMO PROJECT

The project used to highlight the differences is built as such:

- Packages:
 - There are three instances of the same package in the project.
 - Two instances have the exact same constituent items, while one instance has had one of the constituent items removed.

- The two pack instances that are the same have different discounts applied to them (one is discounted at 5%, the other at 10%).
- One of the matching instances has its “Summarize package in Client Reports” flag set to true, while the other two package instances are set to false.
- Equipment Items:
 - There are four instances of the same equipment item in the project
 - Two instances have not been accessorized
 - Two instances have been accessorized in the exact same way.
 - One of the accessorized instances has its “Hide Accessory Detail in Client Reports” flag set to true.

PACKAGE DETAIL DIFFERENCES

This section will focus on the differences in how the Package items in a Proposal are grouped in the SI4 Proposal and the SI5 Proposal.

HIDE ALL PACKAGE DETAIL

When a “Proposal” is generated and all package detail is hidden the following results are produced.

SI4

_Unassigned		
3	Rick Test Package My test package to view data.	2,316.00

SI5

Unassigned		
2	Rick Test Package This is my demo test package	\$1,655.75
1	Rick Test Package This is my demo test package	\$660.25

Please note that the items are aggregated differently. This is due to the fact that one of the instances has different constituent items from the other two.

NOTE: The “Proposal - Line Item Detail” report that I created for distribution last week returns the results like the SI4 version of the report. The reason for this is that this report breaks on Manufacturer, then Model (from a reporting standpoint the package name becomes the “Manufacturer”) as opposed to Item Hash. The three packages are all rooted from the same package. No detail, however, can be shown in this report.

The results are shown below:

Unassigned

3	Rick Test Package	\$2,316.00
	This is my demo test package	

SHOW ALL PACKAGE DETAIL

When a "Proposal" is generated and all package detail is shown the following results are produced.

S14

assigned

1	Rick Test Package	
	My test package to view data.	
1	Advent HERITAGE 500	190.00
	3-way tower speakers with 4" woofers	
1	Sony STR-DE 1075	660.25
	100w x 6ch surround receiver	
		850.25
1	Rick Test Package	
	My test package to view data.	
1	Advent HERITAGE 500	180.00
	3-way tower speakers with 4" woofers	
1	Sony STR-DE 1075	625.50
	100w x 6ch surround receiver	
		805.50
1	Rick Test Package	
	My test package to view data.	
1	Sony STR-DE 1075	660.25
	100w x 6ch surround receiver	
		660.25

S15

Unassigned

2	Rick Test Package	\$1,655.75
	This is my demo test package	
1	Advent HERITAGE 500	\$180.00
	3-way Tower Speakers With 4" Woofers	
1	Sony STR-DE1075	\$625.50
	100w X 6ch Surround Receiver	
1	Rick Test Package	\$660.25
	This is my demo test package	
1	Sony STR-DE1075	\$660.25
	100w X 6ch Surround Receiver	

There are several points that must be made here.

- When “Showing All Package Detail”, SI4 report **DOES NOT** aggregate items (under any circumstances).
- The SI5 proposal aggregates the two items that have the same constituent items (for a quantity of 2) and lists the third instance as a separate line item.
- The quantities represented in the sub-report (“package details”) represent an instance of a package, not the aggregate of all the packages. This shows that we have two packages and each contain one instance of each item.
- **NOTE (THIS IS IMPORTANT, DO NOT MISS THIS POINT):** The prices reflected for constituent items in an aggregated package will reflect the prices for one of the instances, and the math may not be correct.

POINT FOUR ABOVE IN DETAIL

The last point made above deserves some further explanation.

We have two instances of the package with the same items. Each instance has a different discount applied. The items contained in the package are the same regardless of price (not part of the hash algorithm) so when the package details are shown, the prices reflect the prices associated with the instance the detail sub report runs against.

If one looks at the example above and does the math, it seems to NOT work out:
 $(\$625.50 + \$180.00) * 2 = \$1611$ (NOT the \$1655.75 shown as the sub total).

The subtotal is correct as these instances are the same, but with different prices. The solution to this is to:

- Document the potential issue (how many users apply different discounts to the same package?).
- Add a parameter to show/hide the price for the constituent items **OR** simply remove the price.

SHOW/HIDE PACKAGE DETAIL BASED ON SETTING

When a “Proposal” is generated and package detail is shown based on the instances setting, the following results are produced.

SI4

1 Rick Test Package

My test package to view data.

1	Advent HERITAGE 500	190.00
	3-way tower speakers with 4" woofers	
1	Sony STR-DE1075	660.25
	100w x 6ch surround receiver	
		850.25

1 Rick Test Package

My test package to view data.

1	Sony STR-DE1075	660.25
	100w x 6ch surround receiver	
		660.25
1	Rick Test Package	805.50
	My test package to view data.	

SI5

Unassigned

2	Rick Test Package	\$1,655.75
	This is my demo test package	
1	Advent HERITAGE 500	\$180.00
	3-way Tower Speakers With 4" Woofers	
1	Sony STR-DE1075	\$625.50
	100w X 6ch Surround Receiver	
1	Rick Test Package	\$660.25
	This is my demo test package	
1	Sony STR-DE1075	\$660.25
	100w X 6ch Surround Receiver	

There are several points that must be made here:

- The SI4 Proposal does not aggregate the packages.
- The SI4 Proposal indents one of the line item instances of the package. If you don't look carefully, the third instance of the package looks like an item in the second instance.
- The SI5 Proposal aggregates the instances of the package. Since the two instances of the package are grouped together and one is set to "Summarize" and the other is NOT, the detail is shown. This simply means that when the packages are aggregated, if one of the instances is flagged to show detail, then the detail will be shown.

EQUIPMENT DETAIL DIFFERENCES

This section will focus on the differences in how the equipment items in a Proposal are grouped in the SI4 Proposal and the SI5 Proposal. Some of the same issues that were demoed in the package differences appear here also, but there are some other issues so it makes sense to run through the various scenarios.

HIDE ALL ACCESSORY DETAIL

When a "Proposal" is generated and all accessory detail is hidden the following results are produced.

SI4

us1

181	2	Denon AVR-1083	400.00
		7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	
	2	Denon AVR-1083	420.00
		7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	

SI5

Campus1

2	Denon AVR-1083 7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	\$400.00
2	Denon AVR-1083 7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	\$420.00

You will immediately notice that these results match between SI4 and SI5. The difference is that the SI4 Proposal is not consistent with how items are aggregated between showing no detail in packages and equipment. In SI4, all three packages were grouped together for a quantity of three. The equipment items are grouped together (seemingly) based on accessorized details.

The SI5 Proposal is consistent when it comes to aggregating packages and equipment items with no detail.

NOTE: The "Proposal - Line Item Detail" report that I created for distribution last week aggregates all instances of the item for a quantity of four as the break is on "Manufacturer", "Model" as opposed to Item Hash. No detail, however, can be shown in this report.

The results are shown below:

Campus1

4	Denon AVR-1083 7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	\$820.00
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SHOW ALL ACCESSORY DETAIL

When a "Proposal" is generated and all accessory detail is shown the following results are produced.

SI4

2	Denon AVR-1083 7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	400.00
1	Denon AVR-1083 7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	200.00
1	<i>Denon AHD-210</i> Stereo headphones	10.00
1	Denon AVR-1083 7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	200.00
1	<i>Denon AHD-210</i> Stereo headphones	10.00

SI5

Campus1

2	Denon AVR-1083	\$400.00
	7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	
2	Denon AVR-1083	\$420.00
	7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	
1	Denon AHD-210	\$10.00
	Stereo Headphones	

Please notice that only the non-accessorized instances of the item are aggregated in the SI4 Proposal. The SI5 Proposal aggregates both sets of matching items.

NOTE: The points made above regarding quantities and the possibility of “price” issues as outlined in the section “Show All Package Detail” apply here as well.

SHOW OR HIDE BASED ON EQUIPMENT SETTING

When a “Proposal” is generated and accessory detail is shown based on the instances’ setting, the following results are produced.

SI4

2	Denon AVR-1083	400.00
	7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	
1	Denon AVR-1083	200.00
	7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	
1	Denon AHD-210	10.00
	Stereo headphones	
1	Denon AVR-1083	210.00
	7.1 A/V receiver with dolby digital surround ex, dolby pro logic ii & DTS ES discrete 6.1	

SI5

2	Denon AVR-1083	\$400.00
	7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	
2	Denon AVR-1083	\$420.00
	7.1 A/V Receiver With Dolby Digital Surround Ex, Dolby Pro Logic II & DTS ES Discrete 6.1	
1	Denon AHD-210	\$10.00
	Stereo Headphones	

Again, note that the SI4 Proposal does not aggregate the items that are accessorized the same. Like the packages in SI5 Proposal, if one item in the grouping is set to show detail, then detail will be shown.

CONCLUSION

Aggregating items in the SI4 Proposal and the SI5 Proposal, show some startling issues in how the SI4 Proposal presented information.

The SI5 Proposal goes a long way to better presenting proper item aggregation and clearer results, but we will have to determine how we want to deal with the potential issue of showing pricing on child items in the proposal.