



Property of WilloWare Incorporated

DS0159
Serial Number– Multi-Incrementing Segments



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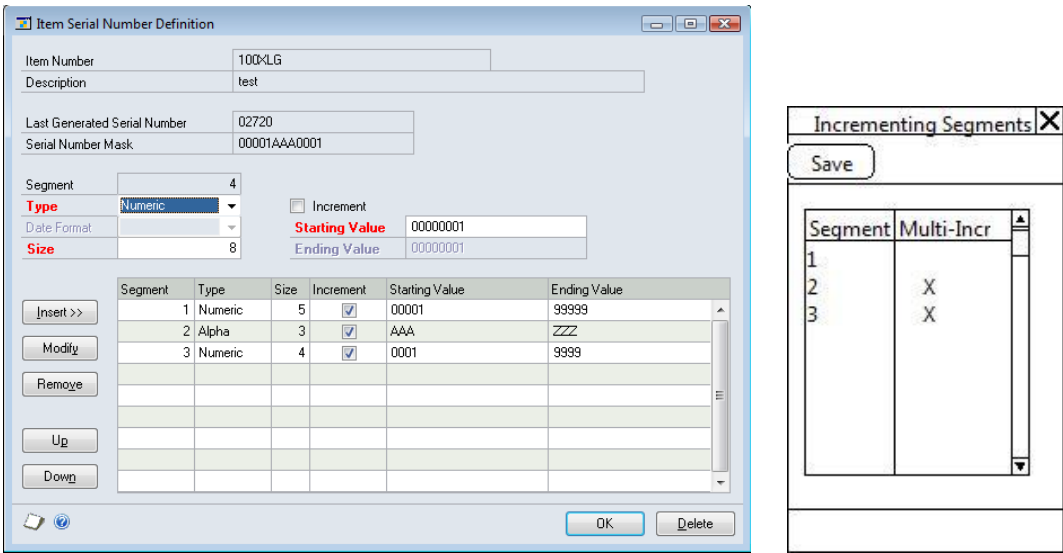
Problem Definition

Problem Definition	CCDA																																																						
<p>ACMECO is using Dynamics GP Manufacturing to create printed circuit boards. The boards are serial numbered. ACMECO needs to have more than one segment in the serial number increment each time a new serial numbered is generated. Since GP increments one segment at a time, serial numbering is currently a manual process.</p> <p>Below is an example of a serial number mask from Dynamics GP.</p> <table border="1" data-bbox="331 656 1129 938"> <thead> <tr> <th>Segment</th> <th>Type</th> <th>Size</th> <th>Increment</th> <th>Starting Value</th> <th>Ending Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Numeric</td> <td>5</td> <td><input checked="" type="checkbox"/></td> <td>00001</td> <td>99999</td> </tr> <tr> <td>2</td> <td>Alpha</td> <td>3</td> <td><input checked="" type="checkbox"/></td> <td>AAA</td> <td>ZZZ</td> </tr> <tr> <td>3</td> <td>Numeric</td> <td>4</td> <td><input checked="" type="checkbox"/></td> <td>0001</td> <td>9999</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>GP would normally generate the first two serial numbers like this:</p> <ul style="list-style-type: none"> • 00001AAA0001 • 00001AAA0002 <p>The final segment would increment until 9999, at which point the second segment would be incremented to AAB and the last segment would rollover to 0001.</p> <p>What ACMECO needs is the ability to have more than one segment increment at the same time. For example, if the last two segments are supposed to increment at the same time, the first two serial numbers would be:</p> <ul style="list-style-type: none"> • 00001AAA0001 • 00001AAB0002 	Segment	Type	Size	Increment	Starting Value	Ending Value	1	Numeric	5	<input checked="" type="checkbox"/>	00001	99999	2	Alpha	3	<input checked="" type="checkbox"/>	AAA	ZZZ	3	Numeric	4	<input checked="" type="checkbox"/>	0001	9999																															
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Solution Overview

<i>Solution Overview</i>	CCDA
<p>The existing Dynamics GP serial numbering setup will be used to create a serial number mask. A new window will be added that allows users to indicate which segments should be “multi-incrementing” segments.</p> <p>There are two windows in GP that support auto-generation of serial numbers:</p> <ul style="list-style-type: none">• Purchasing Serial Number Entry• Manufacturing Serial Number Entry <p>These two windows will be modified to use this new “multi-incrementing” logic.</p>	

Design Features

Multi-Incrementing Segments	CCDA																																
<p>A new window will be added called Incrementing Segments. This will be opened from the Extras menu on the Item Serial Number Definition window.</p>  <p>The screenshot shows the 'Item Serial Number Definition' window with the following details:</p> <ul style="list-style-type: none"> Item Number: 1004LG Description: test Last Generated Serial Number: 02720 Serial Number Mask: 00001AAA0001 Segment: 4 Type: Numeric Size: 8 Increment: <input type="checkbox"/> Starting Value: 00000001 Ending Value: 00000001 <p>Below these fields is a table of segments:</p> <table border="1"> <thead> <tr> <th>Segment</th> <th>Type</th> <th>Size</th> <th>Increment</th> <th>Starting Value</th> <th>Ending Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Numeric</td> <td>5</td> <td><input checked="" type="checkbox"/></td> <td>00001</td> <td>99999</td> </tr> <tr> <td>2</td> <td>Alpha</td> <td>3</td> <td><input checked="" type="checkbox"/></td> <td>AAA</td> <td>ZZZ</td> </tr> <tr> <td>3</td> <td>Numeric</td> <td>4</td> <td><input checked="" type="checkbox"/></td> <td>0001</td> <td>9999</td> </tr> </tbody> </table> <p>Buttons for 'Insert >>', 'Modify', 'Remove', 'Up', and 'Down' are visible. The 'Incrementing Segments' dialog is also shown, with a 'Save' button and a table:</p> <table border="1"> <thead> <tr> <th>Segment</th> <th>Multi-Incr</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td>X</td> </tr> <tr> <td>3</td> <td>X</td> </tr> </tbody> </table>	Segment	Type	Size	Increment	Starting Value	Ending Value	1	Numeric	5	<input checked="" type="checkbox"/>	00001	99999	2	Alpha	3	<input checked="" type="checkbox"/>	AAA	ZZZ	3	Numeric	4	<input checked="" type="checkbox"/>	0001	9999	Segment	Multi-Incr	1		2	X	3	X	
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2	X																																
3	X																																

Navigation: Extras >> Additional >> Incrementing Segments

Segments marked in the Incrementing Segments window will always increment with each newly generated serial number.

Only Segments that are marked to Increment in the Serial Number Definition window will be allowed to be marked as Multi-Incrementing in the Incrementing Segments window.

Therefore, any rules that GP applies to serial number masks and incrementing segments will affect the multi-incrementing segments. For example, symbols, dates and spaces cannot be marked as incrementing.

Field	Function
Segment	Displays the Segment number from the Serial Number Definition
Dual Incr.	A check box field to indicate multi-incrementing segments
SAVE	Saves the setup

<i>Auto-Generate Serial Numbers</i>	CCDA
<p>The following two windows in GP have the ability to “auto-generate” serial numbers.</p> <ul style="list-style-type: none"> • Purchasing Serial Number Entry • Manufacturing Serial Number Entry <p>When a user clicks the “Auto-Generate” button, the system will generate the correct number of new serial numbers using the multi-incrementing segment logic.</p> <p>There will be no visible change to these windows.</p> <p>The following rules/conditions will apply:</p> <ul style="list-style-type: none"> • The software will check for, and prevent, creation of duplicate serial numbers. In the event an auto-generated serial number overlaps with an existing serial number, the next available serial number will be found, and auto-incrementing will proceed from that point. • The multi-increments segments will increment together until any one of the segments reaches a maximum. There will be no rollover functionality provided. So, using the example in the Problem Definition section, the first serial number is 00001AAA0001. The AAA segment can product 17576 combinations, while the 0001 can only support 9999. When 9999 is reached in that segment the user will not be able to auto-generate serial numbers, and will receive a warning message to that effect. • Unused serial numbers will not be reused. GP stores a “last generated serial number” in the Item Master (IV00101). The next serial number is always calculated off this field. In the event that serial numbers are auto-generated, but for some reason the transaction is deleted, there will be a gap in the serial numbering sequence. 	

