

Title: Using Output Text Commands with the Windows WinControl Utility
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Summary

The Output Text command (OT), available on both the DCX-AT200 and DCX-AT300 advanced motion controllers, require extra care when used in conjunction with the WinControl utility that is supplied as part of the Motion Control API (MCAPI).

More Information

For performance reasons, whenever WinControl detects output from a motion controller it attempts to read an entire line of output, up to and including the carriage return character at the end of the line. This technique keeps WinControl responsive without hogging resources from other applications that may be running at the same time.

The following example code is meant to display the numbers one to four, with a one-second delay between numbers:

```
OT"1",WA1.0,OT"2",WA1.0,OT"3",WA1.0,OT"4"
```

The output actually looks like this (comments are not part of the controller output):

```
1           ; screen looks like this when the sample starts  
1234       ; screen looks like this after 3 seconds
```

Notice that intermediate displays (i.e. 12 or 123) do not show in this example. This is because once WinControl detects output (the lone "1" at the start) it attempts to read an entire line of output, and ends up waiting for the entire string "1234" before displaying the remaining text.

The solution is to always include a carriage return character '\r' at the end of each Output Text string when you want the strings to display immediately. A corrected version of the above sample would be:

```
OT"1\r",WA1.0,OT"2\r",WA1.0,OT"3\r",WA1.0,OT"4\r"
```

The output of the corrected sample would look like this:

```
1           ; at start  
2           ; after 1 second  
3           ; after 2 seconds  
4           ; after 3 seconds
```

See Also

TechNOTE TN1024