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Suprtool 6.0 for HP e3000:

# Change Notice

by Robelle Solutions Technology Inc.



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# Introducing Suprtool Version 6.0

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## Introduction

Suprtool provides fast access to your data on the HP e3000. With Suprtool, you can perform many necessary DP functions easily, with just a few simple commands. At Robelle we are constantly working on your enhancement requests so that we can include them every year when we release an updated version of Suprtool.

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## Highlights in Suprtool 6.0

- The List command now has a NOSAMETO option to turn off the SAMETO feature.
- Set Backwardchain On, will cause the Chain command to do a backward chained read.
- Suprtool has some new Set Commands such as, InitNumExtent, MaxNumExtent, SortExtMem and SortMemAddr, which can be used to reduce the number of Extents used in some files and internal sort files.
- STExport has a new set command called Set Excel Leadzero On which tells the Excel command to add leading zeroes to the fields specified in the Excel Preserve command.
- Suprtool has a new function available to the if/extract commands called \$inrecnum, which expects a double integer result.
- Suprtool has a new function called \$leadzeroz, which will add leading zeroes to a display field and will optionally justify the field.
- Suprtool has a four new string handling functions, specifically, \$justifyl, \$justifyr, \$leadzerob and \$respace.

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## Highlights in Suprtool 5.9

- A new \$month function in the if / extract option allows you to add or subtract a number of months from a given date.
- STExport has a new command called Excel command which allows you to format a field in a format that allows leading zeroes or spaces to be preserved.

- A new option called JSON will output SD data in Java Script Object Notation.
- Suprtools new banner would show the incorrect day and day of week in certain circumstances. This was cosmetic only.
- Suprtool previously may have found “bad” records in jumbo master datasets under certain conditions.
- Suprtool/Open now has the option to read MySQL databases. We are looking for feedback on where to take this feature.

---

## Highlights in Suprtool 5.8

- Set CleanChar to a single character, after a Set CleanChar “<null>” would not come into effect due to the special null flag not being reset. This was in both Suprtool and STExport.
- The input command now accepts the keywords(\$first/\$last) when inputting a range of records.
- Suprtool would lose track of Table data field information, on tables held with the hold option in subsequent tasks.

---

## Highlights in Suprtool 5.7

- STExport now has a “suprmgr” file similar to Suprtool. STExport will process all the commands found in STEXPMPGR.PUB.SYS.
- Suprlink now has a “suprmgr” file similar to Suprtool. Suprlink will process all the commands found in LINKMGR.PUB.SYS.
- Suprtool now has the \$proper function which will shift the first character in a string and any first character after a space or ampersand.

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## Highlights in Suprtool 5.6

- Suprtools' extract command now has three special keywords to help with extract using a range, which is designed to make your Suprtool scripts more easily maintained. Suprtool now has \$all, \$first and \$last which respectively means all fields, the first field or the last field. Note that \$first and \$last may only be used in a range extract.
- \$subcount has been added to keep a running count for a given sort break.

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## Known Problems

Set Itemlock does not work in one particular case.

---

## Compatibility

Suprtool/iX is compatible with MPE V, MPE XL, and MPE/iX, including MPE/iX 6.5, 7.0 and MPE/iX 7.5.

Suprtools default prefetch value has been changed from 2 to zero.

Ksam64 files were not assumed to be Self-describing like CM KSAM and KSAMXL files when it was the input file and had labels.

A warning will print if a non-regular SD file is loaded into a Table with the data option.

An error will print if an extract command attempts to reference data when loaded from table that in turn was loaded when using a non-regular SD file, such as KSAM/XL, KSAM64 and CM KSAM.

---

## CPU Serial Number and CPU Name (HPSUSAN & HPCPUNAME)

Suprtool and its associated products run only on CPUs whose serial numbers have been encoded ("showvar hpsusan" on MPE/iX). They also may be encoded with your HPCPUNAME values. If it fails to run and you get an "invalid HPCPUNAME" or "invalid HPSUSAN" error message, contact Robelle for assistance.

---

## Documentation

The user manual contains the full description of all the Suprtool suite of products including Dbedit, Suprlink, STExport and Suprtool2, as well as usage tips and commands for each. The manuals are up-to-date with all the latest changes. To see only the changes in the latest version, see the "What's New" section of the manual, or see the change notice.

You can download our manuals and change notices in various formats and you can order printed (hardcopy) manuals from our web site at:

<http://www.robelle.com/library/manuals/>

# Installation

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## Overview

We have two types of Installations, Tape and Download. We provide links to the Installation instructions on our web site for each type of Install.

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## Ecometry Users

Users of the Ecometry application need to use the installation instructions supplied by Ecometry Corporation. Those instructions have extra steps for updating the Ecometry code accounts.

You will find the Ecometry version of these instructions at <http://www.robelle.com/ecometry/>

Types of installations, tape, download combined qedit and suprtool tape.

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## Installation Instructions

If you received a production release tape from Robelle, then you can install using the instructions on this web page:

<http://www.robelle.com/support/install/tape/stprod.html>

If you downloaded the Suprtool production release from our web site then the instructions can be found here for the ftp download method:

<http://www.robelle.com/downloads/install-stprod-ftp.html>

and here for the WRQ download method:

<http://www.robelle.com/downloads/install-stprod-wrq.html>

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## Installation Assistance

If you have any questions about the upgrade process or run into any problems, please call us. Technical support is available on weekdays from 8 a.m. to 4 p.m. Pacific time at 289.480.1060 or you can e-mail your question to [support@robelle.com](mailto:support@robelle.com).

# Enhancements in Version 6.0

---

## Introduction

Suprtool is constantly being updated with new features. The following section describes the new enhancements to Suprtool since Suprtool 5.9.10

---

## \$List NoSameTo

The List command now has a NOSAMETO option to turn off the SAMETO feature.

---

## BackwardChain

The Set command, BackWardChain when turned on will tell the Chain command to do a Backward Chained read.

---

## Extents

Suprtool for MPE, now has features designed to help control and reduce the number of extents used in Output files and some internal files.

---

## SET INITNUMEXTENT number

Set InitNumExtent, when specified with a number between 1 and 32 and will use that number on the creation of the Output file, in the Initial Extents parameter.

This can help with extent allocation depending on your systems disc space and fragmentation. Keep in mind if you set InitNumExtent to 1, and MaxNumExtent is also set to 1, all of the disc space required for the output file will attempt to be allocated at once.

When a value between 1..32 is specified for InitNumExtent, and InitExtents is turned on, the InitExtents flag will be turned off.

---

## SET MAXNUMEXTENT number

Set MaxNumExtent Set MaxNumExtent, when specified with a number between 1 and 32, will use that number on the creation of the Output file.

This can help with extent allocation depending on your system disc space and fragmentation.

Keep in mind if you set InitNumExtent to 1, and MaxNumExtent is also set to 1, all of the disc space required for the output file will attempt to be allocated at once.

It is also important to note that if MaxNumExtent is set to any value between 1..32, and the InitExtents flag is on, the InitExtents flag will be turned off.

---

## SET SORTEXTMEM ON

Set SortExtMem, when turned on reduces some of the space used for memory mapped file used for sorting. The algorithm for the amount of space used is the flimit of the file plus 10 million bytes.

You can increase the adder, by entering a number between 10 million and 2billion with the set SortMemAddr command.

Turning this option on may cause errors indicating that sort overflowed or hit a bounds condition. You can increase the amount of space again by using set SortMemAddr command.

---

## SET SORTMEMADDR number

Set SortMemAddr accepts a number between 10 million and 2billion which will add space to a memory mapped file used during the sort process and is to be used with Set SortExtMem, when it is turned on and the default adder value is not enough to prevent a Bounds condition.

---

## \$INRECNUM

The if / extract commands can now utilize a new function called \$INRECNUM, which allows you to use the input record number in certain tasks. For example, the task below would find record number 11.

```
In somefile  
If $inrecnum=11
```

You can also, utilize the \$inrecnum function in the extract command:

```
In somefile
Def recnum,1,4,double
Ext recnum=$inrecnum
```

The \$inrecnum function was designed to find records especially in the instance where duplicate records are in a particular data source and cannot be isolated by any other means.

describes the new enhancements to Suprtool since Suprtool 5.9

---

## \$LEADZEROZ

The if / extract commands can now utilize a new function called \$LEADZEROZ, which allows you to add leading zeroes to a specific display field. This was designed specifically for the extract command and fixing up data but can be used in the if command as well.

\$NUMBER is capable of fixing up numbers, but the new \$LEADZEROZ function is more lightweight and simply adds leading zeroes, and has an option to justify right as shown below. The source data looks like this:

```
/PRINT LEADZERO
1
2
3
4
5
6
7
8
9
10
12
12345
220
```

You can format with the following:

```
>IN LEADZERO.SUPRTEST
>DEF A,1,12,DISPLAY
>EXT A=$LEADZEROZ(A,J)
>out *
>xeq
000000000001
000000000002
000000000003
000000000004
000000000005
000000000006
000000000007
000000000008
000000000009
000000000010
000000000012
000000012345
000000000220
IN=13, OUT=13. CPU-Sec=1. Wall-Sec=1.
```

The \$LEADZEROZ function cannot fix issues like commas and decimal places in a display field, this can be handled by the \$number function.

---

## \$LEADZEROB

The if / extract commands can now utilize a new function called \$LEADZEROB, which allows you to add leading zeroes to a specific byte field. This was designed specifically for the extract command and fixing up data but can be used in the if command as well. The data looks like this:

```
/PRINT LEADZERO
1
 2
   3
    4
     5
      6
       7
        8
         9
10
12
12345
220
```

You can clean it up with the following:

```
>IN LEADZERO.SUPRTEST
>DEF A,1,12,byte
>EXT A=$LEADZEROB(A,J)
>out *
>xeq
000000000001
000000000002
000000000003
000000000004
000000000005
000000000006
000000000007
000000000008
000000000009
000000000010
000000000012
000000012345
000000000220
IN=13, OUT=13. CPU-Sec=1. Wall-Sec=1.
```

---

## \$JUSTIFYL

The if / extract commands can now utilize a new function called \$JUSTIFYL, which allows you to left justify text to the left side of a field.

```

>in leadzero
>def b,1,12,byte
>ext b=$justifyl(b)
>out *
>xeq
1
2
3
4
5
6
7
8
9
10
12
12345
220
IN=13, OUT=13. CPU-Sec=1. Wall-Sec=1.

```

---

## \$JUSTIFYR

The if / extract commands can now utilize a new function called \$JUSTIFYR, which allows you to right justify text to the right side of a field.

```

>in leadzero.suprtest
>def a,1,12,byte
>ext a=$justifyr(a)
>out *
>xeq
      1
      2
      3
      4
      5
      6
      7
      8
      9
     10
     12
    12345
     220
IN=13, OUT=13. CPU-Sec=1. Wall-Sec=1.

```

---

## \$RESPACE

The if / extract commands can now utilize a new function called \$RESPACE, which allows you to fixup byte data that has multiple spaces in between text. For example your data looks like this:

```

>in respace.suprtest
>def text,1,40
>ext text
>out *
>xeq
this is a test
  this is a      test
this is a  test
this      is a test
this is a  test
this is a test
  please note this is a      test
this is a  test
this      is a      test
this is a test
      this is a  test
  this is a test
this      is a  test
this is a test
dummy record
this is a not  test
silly record
IN=30, OUT=30. CPU-Sec=1. Wall-Sec=1.

```

It can easily be fixed up and converted to what is shown below:

```

>in respace.suprtest
>ext text=$respace(text,J)
>out *
>xeq
this is a test
please note this is a test
dummy record
this is a not test
silly record
IN=30, OUT=30. CPU-Sec=1. Wall-Sec=1.

```

# Enhancements in Version 5.9

---

## \$Month

The if / extract commands can now utilize a new function called \$Month, which will add a given number of months to a given date in the format of ccyyymmdd or yyyyymmdd.

For Example:

```
In somefile
Item mydate,date,ccyyymmdd
Def targetdate,1,4,double
Ext targetdate=$month(mydate,+4)
```

The above task will take the field mydate and add four months to it. Suprtool will check if the date is valid and adjust the date within reason. For example if the given month for mydate has 31 days and the day is 31, and the month mydate becomes when the date is added to has only 30 days. The date will be adjusted to have the 30<sup>th</sup> for the day.

---

## Excel Command

The Excel command can be used to produce columns of data that when imported will preserve spaces or leading zeroes.

EXCEL PRESERVE <fieldname>

### Example

STExport can generate columns that are imported into Excel in such a way that leading zeroes are preserved. While the format produced is not traditional CSV, the format will produce a field in the form:

```
= "00055555"
```

This form when imported into Excel will preserve the leading zeroes. In order to invoke this format the Excel command has very simple syntax:

```
$in fileexcel
$col fixed
$quote double
$zero leading
$excel preserve newchar int-field
$out *
$xeq
```

These simple commands will generate a file that will have the usually formatted fields as well as some fields formatted specifically for preserving spaces and leading zeroes in Excel.

The result of such an STExport task will look as follows:

```
= " 1111 ", = " 0111", 00001111, +000001111
= " 1111 ", = " 0222", 00002222, +000002222
```

---

## Json Output

The JSON command specifies STExport to generate Json output. Use the JSON to produce Java Script Object Notation documents for either Internet or Intranet applications.

JSON

OBJECT "string"

ONEPERLINE

### Example

STExport can generate JSON output with just a few commands.

```
$input file1sd
$JSON
$output myJSON
$xeq
```

These four simple commands will generate a file that can be read by various applications. The result of such an STExport task will look as follows:

```
[{"CHAR-FIELD": "11111", "INT-FIELD": 1111, "ZONED-FIELD": 11111}]
```

### Object

The Object option allows the JSON data to be wrapped in a specific Object description.

```
JSON Object "Json object"
```

Looks like this:

```
{"Json object":
[{"CHAR-FIELD": "11111",
  \ "INT-FIELD" \ : 1111,
  \ "DBL\FIELD" \ : 11111,
  \ "PACKED\FIELD" \ : +1111,
  \ "PACKED\FIELD" \ : +11111,
  \ "QUAD\FIELD" \ : 11111,
  \ "ID\FIELD" \ : 1,
  \ "LOGICAL\FIELD" \ : 111,
  \ "DBLLOG\FIELD" \ : 11111,
  \ "ZONED\FIELD" \ : 11111
}]
}
```

Note that the example of the Output has one field per line with data. Normally this would have to be specified via the command line but the data is shown this way simply due to space constraints.

### OnePerLine

For files that have many fields you may want to consider using the OneLine option of the JSON command:

```
JSON OnePerLine
```

STExport will put each field and data on one line with the appropriate beginning and end notation.

```
[{"CHAR\FIELD": "11111",  
\INT\FIELD": 1111,  
\DBL\FIELD": 11111,  
\PACKED\FIELD": +11111,  
\PACKED\.-FIELD": +11111,  
\QUAD\FIELD": 11111,  
\ID\FIELD": 1,  
\LOGICAL\FIELD": 1111,  
\DBLLOG\FIELD": 11111,  
\ZONED\FIELD": 11111  
}]
```

## Multiple Json Commands

You can enter multiple JSON commands per task to set the JSON options you require.

```
$in file1sd  
$JSON Object "Json object"  
$JSON OnePerLine  
$out *  
$xeq
```

An example of the output generated by the above commands is as follows:

```
{"Json object":  
[{"CHAR\FIELD": "11111",  
\INT\FIELD": 1111,  
\DBL\FIELD": 11111,  
\PACKED\FIELD": +11111,  
\PACKED\.-FIELD": +11111,  
\QUAD\FIELD": 11111,  
\ID\FIELD": 1,  
\LOGICAL\FIELD": 1111,  
\DBLLOG\FIELD": 11111,  
\ZONED\FIELD": 11111  
}]  
}
```

# Enhancements in Version 5.8

---

## Introduction

Suprtool is constantly being updated with new features. The following section describes the new enhancements to Suprtool since Suprtool 5.7.11

---

## Input (\$first/\$last)

Suprtool now has \$first and \$last mnemonics, which can be used on a range selection of records on the input command. It was designed to handle a request to list the last N number of records in a file as in:

```
Input somefile($last-10/$last)
```

Suprtool will parse the Range selection and semantically check if the record range entered is logical. For instance, \$first-2 and \$last+10, which do not make logical sense would throw an error. Similarly if a record only has 5 records in it then \$last-10 or \$first+7, would also throw an error.

---

## Stexpmgr

STExport now has a “suprmgr” file similar to Suprtool. STExport will process all the commands found in STEXPMPGR.PUB.SYS.

# Enhancements in Version 5.7

---

## Introduction

Suprtool is constantly being updated with new features. The following section describes the new enhancements to Suprtool since Suprtool 5.6.

---

## Linkmgr

Suprlink now has a “suprmgr” file similar to Suprtool. Suprlink will process all the commands found in LINKMGR.PUB.SYS.

---

## Stexpmgr

STExport now has a “suprmgr” file similar to Suprtool. STExport will process all the commands found in STEXPMPGR.PUB.SYS.

---

## \$Proper

Suprtool now has the \$proper function which will shift to upper case the first character of a byte type field and after any space or ampersand. It will also shift to lower case any other characters in the byte-field.

```

>in mprod
>list stan
>xeq
Apr 29, 2014 13:00      File: mprod      Page 1

PRODUCT-DESC

skil 3/8" variable speed drill
b&d router
skil var. sp. auto-scroll saw
skil 8 1/2" circular saw
b&d cordless screwdriver
makita 8 1/4" circular saw
b&d variable speed jigsaw
makita 1/2" router
makita 3/8" var. speed drill
skil router
b&d 7 1/4" circular saw
b&d 3/8" variable speed drill
makita 1" jigsaw

```

Considering the following data, you can fix all of the product names with one simple task:

```

>in mprod
>ext product-desc=$proper(product-desc)
>list stan
>xeq
May 01, 2014 11:40      File: MPROD      Page 1

PRODUCT-DESC

Skil 3/8" Variable Speed Drill
B&D Router
Skil Var. Sp. Auto-Scroll Saw
Skil 8 1/2" Circular Saw
B&D Cordless Screwdriver
Makita 8 1/4" Circular Saw
B&D Variable Speed Jig Saw
Makita 1/2" Router
Makita 3/8" Var. Speed Drill
Skil Router
B&D 7 1/4" Circular Saw
B&D 3/8" Variable Speed Drill
Makita 1" Jig Saw

```

Note that any character after a space, "&", or "-" is upshifted for a proper name. Suprtool will also downshift those characters that do not qualify as needing proper capitalization and it is a capital character, the proper function will downshift those characters. See an example below:

```

>IN NAME
>LIST
>XEQ
>IN NAME.NEIL.GREEN (0) >OUT $NULL (0)
NAME      = NEIL ARMSTRONG

>IN NAME
>EXT NAME=$PROPER(NAME)
>LIST
>XEQ
>IN NAME.NEIL.GREEN (0) >OUT $NULL (0)
NAME      = Neil Armstrong

```

The \$proper function only works on byte type fields. (5.6.12)

---

## \$Translate

Suprtool now has a \$translate function which in conjunction with the translate command allows you to build a translation table, whereby you can translate from any byte character to any character. We have also added a method to a supplied translate table which will allow you to obscure the data such that it can't be read.

```
>in newprod
>list
>xeq
>IN NEWPROD.NEIL.GREEN (0) >OUT $NULL (0)
PRODUCT-DESC = Skil 3/8" Variable Speed Drill

>IN NEWPROD.NEIL.GREEN (1) >OUT $NULL (1)
PRODUCT-DESC = B&D Router

>in newprod
>translate touread
>ext product-desc=$translate(product-desc)
>out unread,link
>xeq
IN=13, OUT=13. CPU-Sec=1. Wall-Sec=1.

>in unread
>num 1
>list
>xeq
>IN UNREAD.NEIL.GREEN (0) >OUT $NULL (0)
PRODUCT-DESC = Hzxo .2)? Epcxpqot Hatts Rcxoo
Warning: NUMRECS exceeded; some records not processed.
IN=2, OUT=1. CPU-Sec=1. Wall-Sec=1.

>in unread
>translate toread
>ext product-desc=$translate(product-desc)
>list
>xeq
>IN UNREAD.NEIL.GREEN (0) >OUT $NULL (0)
PRODUCT-DESC = Skil 3/8" Variable Speed Drill

>IN UNREAD.NEIL.GREEN (1) >OUT $NULL (1)
PRODUCT-DESC = B&D Router
```

You can make your own Translate table using the Translate command, where you can specify the character you want to translate and what you want to translate to, using Decimal Notation. So if you want to translate "A" to "Z", you would type the command:

```
Translate "^65:^90"
```

So you specify the from character on the left in decimal which is the capital-A and the to-character is also in decimal format which is capital-Z, which is decimal 90. If you want to reverse the translation you can simply do the following command and translate the field back with:

```
Translate "^90:^65"
```

This is not meant to be an encryption solution, but it will help obfuscate test data really quickly. (5.6.12)

# Bugs Fixed

---

## Bugs Fixed In Suprtool 5.7.11

**Set CleanChar.** Set CleanChar to a single character, after a Set CleanChar “<null>” would not come into effect due to the special null flag not being reset. This was in both Suprtool and STEXport.

---

## Bugs Fixed In Suprtool 5.7.10

**Table, Data and Hold.** Suprtool would lose track of Table data field information, on tables held with the hold option in subsequent tasks.

---

## Bugs Fixed In Suprtool 5.5

**Ksam64 files.** Ksam64 files were not assumed to be Self-describing like CM KSAM and KSAMXL files when it was the input file and had labels.

**\$edit function.** The \$edit function did not work well with alpha based edit masks and if the target was greater than 32 characters.

**Table File Data Load.** A warning will print if a non-regular SD file is loaded into a Table with the data option. The data is not loaded into the table.

**Table File Data Lookup.** An error will print if an extract command attempts to reference data when loaded from table that in turn was loaded when using a non-regular SD file, such as KSAM/XL, KSAM64 and CM KSAM.

**BTrees and Chain.** Due to an issue with Btrees, Suprtool would incorrectly select records when doing an update or delete, and if using chain with a btree index on a master dataset.