

VisionX v4 Parameters

Command Line Parameters

An advanced protocol to specify command line parameters is employed by VisionX commands. It permits both positional and position independent parameter specification. Furthermore, it supports the pipelining of commands such that the output from one command can be fed directly into the next command without an intermediate file.

- The goals of the advanced protocol are to minimize the characters needed when manually typing VisionX commands and to provide useful parameter descriptions for each command without having to refer to the manual documentation (see the “-” option).



VisionX-V4 Commands

VisionX v4 Information Parameters

Consider an example command “vsobel” which is a simple edge enhancing filter command that takes an image input and produces an image result.

Information Parameters

Two enquiry parameters “-h” and just “-” provide information about the command.

```
vsobel -H
Usage: vsobel [-H] [if=<inputfile>] [of=<outputfile>]
        [-f] [-d] [-i] [-e]
```

The -H parameter lists all the possible parameters for a command.



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VisionX v4 Information Parameters

Further information can be obtained with the “-” parameter, for example:

```
vsobel -  
Usage: vsobel [-H] [-] [-help]  
[if=] infile vsobel: edge operator  
[of=] output file  
[-f ] float computation option  
[-d ] provide direction information  
[-i ] isotropic flag  
[-e ] euclidian flag
```

The “-” option provides short descriptions of each parameter. It may be specified as the last parameter in a list as a shortcut for situations (often encountered) where a user has already typed several parameters but wishes to then be reminded of the full command syntax.



VisionX-V4 Commands

VisionX v4 Value Parameters

Value Parameters

There are two types of parameters *option* parameters which are preceded by a “-”, such as “-l” above, and *value* parameters which have a “=”, such as “if=” above, and require an additional value argument.

By convention, the primary input file for a command is usually associated with an “if=” prefix and the primary output file is associated with an “of=” prefix; such is the case with vsobel.

Consider that we wish to process a file called “image.vx” and store the result in a file called “edge.vx” using the isotropic “-l” option. This may be specified by either

```
vsobel if=image.vx of=edge.vx -i
```

or

```
vsobel of=edge.vx -i if=image.vx
```



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VisionX v4 Value Parameters

This is an instance of position independent value parameters: the prefix identifies the parameter. This is the standard and most safe method for parameter specification.

- Alternative methods for parameter specification are supported which are especially useful when the user is interactively typing commands. Value parameters may use a positional dependent syntax in which they are satisfied in order.
- The only exception to this is the of= parameter which may be specified by a "-o" prefix. This is very convenient when a number of value parameters are to be specified. Therefore, the previous command could also be specified by

```
vsobel image.vx -o edge.vx -i
```



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The mixing of value parameter types is also permitted; so any of the following are equivalent

```
vsobel if=image.vx -o edge.vx -i
vsobel -i of=edge.vx image.vx
vsobel o edge.vx if=image.vx -i
```

Standard file direction primitives such as <, >, and | are supported such that the following are also equivalent to the above:

```
vsobel -o edge.vx -i < image.vx
vsobel -i of= if= < image.vx > edge.vx
vsobel -i < image.vx > edge.vx
vsobel if=image.vx i > edge.vx
```

- The syntax ``if=" without an argument is used to explicitly state that the value of the argument is the standard input (second example above). Since vsobel only has one input value argument, there is no need to explicitly specify it (third example above).



VisionX-V4 Commands

VisionX v4 Parameter Summary

Parameter Rule Summary

- All Parameters have prefixes and are position independent.
- The -H option is defined for all VisionX commands and prints the command syntax
- The - option provides additional syntax information
- If parameters are given without a prefix they satisfy value parameters (in the order given by -H)

Type	Syntax	Example
option	-[letter, name]	-q
value	<name>=<value>	maximum=100
File names	<name>=<fname>	of=outputfile



VisionX-V4 Commands

VisionX v4 Convention Summary

Summary full naming conventions

Type	Syntax	Example
option	-[letter, name]	-q
value	<name>=<value>	maximum=100
File names	<name>=<fname>	of=outputfile
input file	if=<fname>	if=image1
output file	of=<fname>	of=image2
output file	-o <fname>	-o image2
help	-H	-H
more help	-	-



VisionX-V4 Commands