

# Bulk-editing files with Q

## Introduction

For those who don't know, Q is an editor I've written. I was casting around for some Q feature that would make it stand out from other editors when I stumbled on bulk editing (tell SBo story).

Long story short, when **sbolint** checks all 10200 packages, it produces a 4763-line report. I thought it'd be a plan to correct the most frequent warnings so the report would become short enough to be useful. (maybe show mail archive)

Report is now 217 lines. The rest of this talk is about how I got there.

# Q macros

The way Q can do bulk edits is by using its macro facility. I've just started writing the Macro Writer's Guide (a bit overdue after 45 yrs) so in brief:

To define a macro, use the N-NEWMACRO command. (do h n)  
To invoke a macro, enter ^N (Control-N) followed by the macro id (a single (16-bit) character). To enter a non-printable character, use ^\*<ooo> where ^\* is a real uparrow and ooo is an octal number. All numbers in the macro subsystem are octal, no need to start '0' (Zero).

# Q pseudo-macros

Q provides a number of pseudo-macros (show h pm), invoked the same way as regular macros. Instead of expanding to a sequence of characters as a macro would, a pseudo-macro takes some action like altering control flow (maybe depending on some condition), changing some editing mode, remembering or setting something and so on. This makes it possible to write Q macro programs to e.g. perform bulk edits. Another stand-out feature of Q is that it has a debugger for macro programs but we won't get into that today. Q also has a run machine, quaintly known as the ALU, of which we'll be seeing a lot. (show q -A|k)

# Let's dive in

The most common sbolint warning is:

`LIBDIRSUFFIX` or `SLKCFLAGS` gets set, but never used.

(go through macro suite) [4 top-level macros]

**run.sh** runs all 4 in under 30 seconds. Need to do this after weekly updates. First have to run **sbolint -a** (13 min).

3114 files get edited.

[run.sh has been updated since this talk: see it and README from the next slide].

# Resources

The Q editor:- **git clone** <https://github.com/duncan-roe/q>  
Copy and paste the following URLs into a browser to view the directly, or wget / curl them (lines up to 215 chars):-  
The macros: <https://raw.githubusercontent.com/duncan-roe/q/refs/heads/master/help/contrib/SBo/SBo.qm>  
Bash script to run the show:  
<https://raw.githubusercontent.com/duncan-roe/q/refs/heads/master/help/contrib/SBo/run.sh>  
Instructions: <https://raw.githubusercontent.com/duncan-roe/q/refs/heads/master/help/contrib/SBo/README>