For a given region and pages to erase we have to find the optimal use of erase functions and which sectors to erase

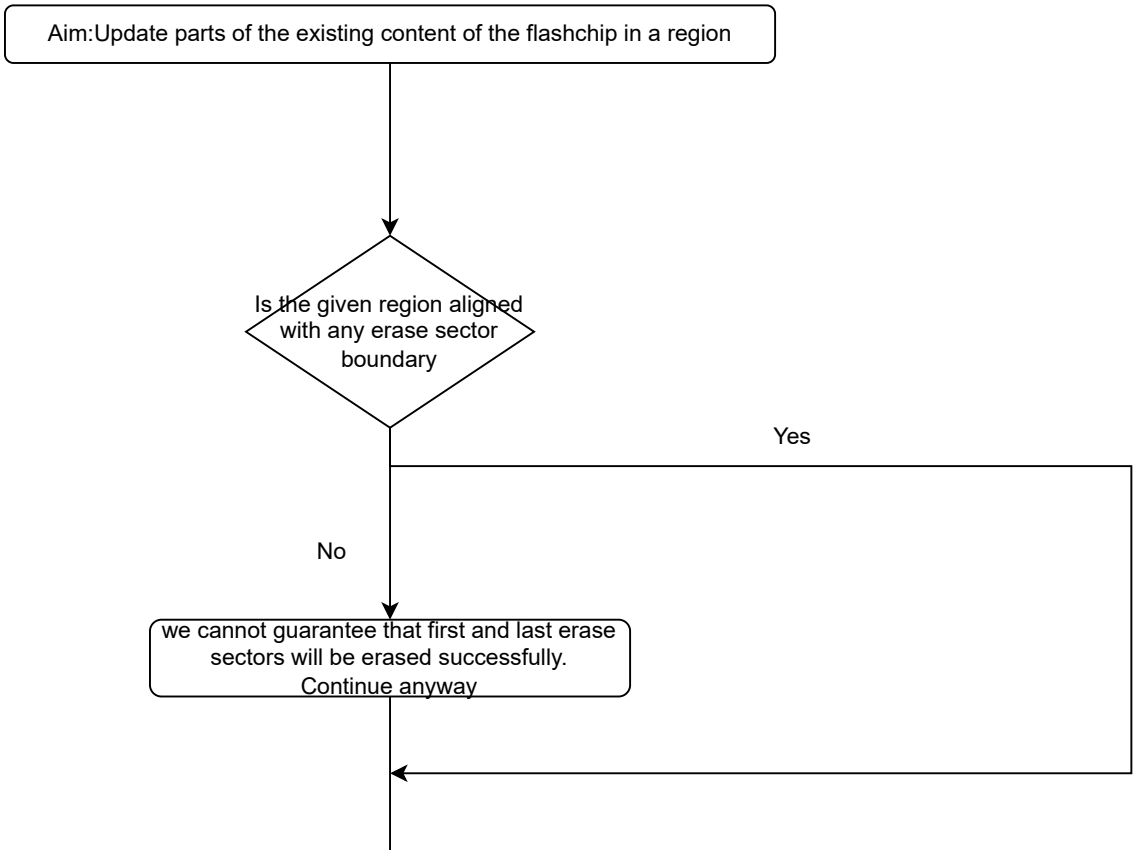
Definitions:
- layout: list of regions
- region: flashrom virtual start and size of the chip
- wp / writeprotect: locked regions of the flash -- cant do anything as the erase functions will fail anyway there
- page: read / write specific
- block / sector: smalest unit of a erase function
- homogeneous erase layout: all erase blocks of a function have the same size (eg W25P16 in flashchips.c)
- non homogeneous erase layout: all erase blocks in a layout might not be of same size (eg `AMD_AM29F002BB in flashchips.c`)

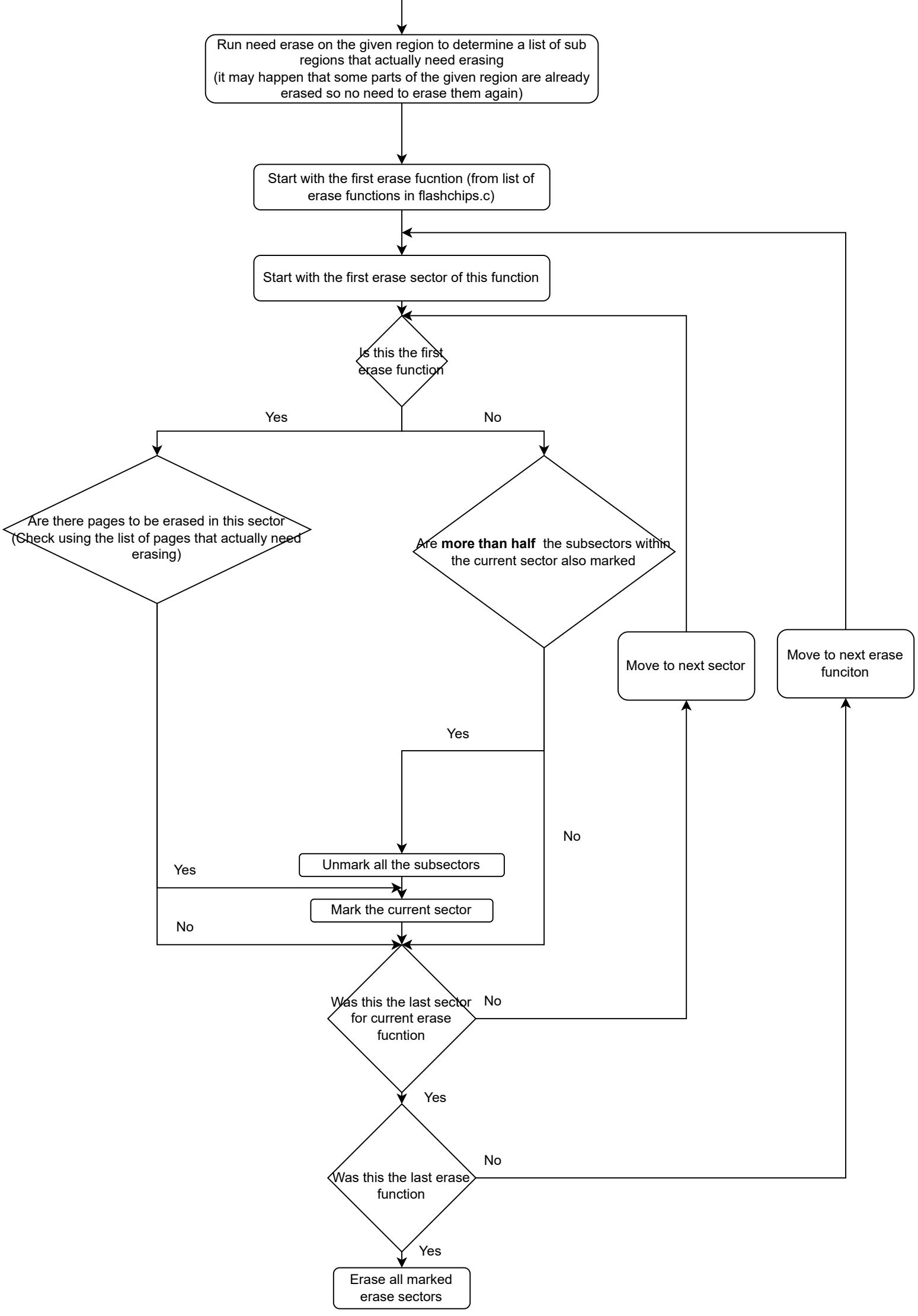
Scenarios:
- Erase the whole flashchip
- Write new content to the whole flashchip
- Erase a region of the flashchip
- Write new content to a region of the flash chip
- Update parts of the existing content of the flashchip
- Update parts of the existing content of the flashchip in a region

Last scenario is the most general case ie writing an algorithm which efficiently handles this case would perform good for all the other cases as well

```
        |____region_to_be_erased_____| |wp|
||||||||||||||||||||X||||||X||XXXXXXX|||||||||||||||||||||||||||||||||||||... read write pages
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  | 4K  |... erase_fn_0
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|          16K          |          16K          |                16K    |... erase_fn_1
+-----------+-----------+-----------+-----------+-----------+-----------+
|                      32K                      |                  32K   ... erase_fn_3
+-----------+-----------+-----------+-----------+-----------+-----------+
|                                            256K                       ... erase_fn_n
+------------------------------------------------+-----------------------
0x0                                                                       ... 0xfff...
```

In the above depiction
| -all the pages
X - pages that actually need erasing




Run need erase on the given region to determine a list of sub regions that actually need erasing
(it may happen that some parts of the given region are already erased so no need to erase them again)
Start with the first erase fucntion (from list of erase functions in flashchips.c)
Start with the first erase sector of this function
Is this the first erase function
Yes
No
Are there pages to be erased in this sector (Check using the list of pages that actually need erasing)
Are more than half the subsectors within the current sector also marked
Move to next sector
Move to next erase funciton
Yes
No
Unmark all the subsectors
Yes
Mark the current sector
No
Was this the last sector for current erase fucntion
No
Yes
Was this the last erase function
No
Yes
Erase all marked erase sectors