Patch list administration

HistoPyramids and their associated algorithms dynamically reorganize the patch list on GPUs.

Left: Classify patches into states according to their current position, direction, size and energy level. Right: Build a HistoPyramid from the classification result.

Top level (here: L2) delivers number of elements in new patch list (here: 11). Fragment shader runs on new patch list - HistoPyramid traversal yields the afdersought old patch list entries.

Tessellation case (new technique for data expansion):
Mod A: One entry from the old patch list maps to four entries in the new patch list. This is caused by the 4 entered at the HP base level, making 4 indices yield the same coordinate in step (b).
Mod B: Old list patch is not copied, but modified according to the clone’s number (calc. at base level traversal).

(a) Traversal same for index 7-11!
(b) Enter data entry from old patch list modifying the patch based on clone number:

3D view, Old patch

New patches
since clone numbers are

Old patch list

HistoPyramid, traversal path (example)