

Review TACLeBench

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Abstract

This document will contain the first review of the TACLeBench code regarding the topic coding/encoding algorithms.

1 Coding/Encoding

- ~~DSPstone-fixed-point/adpcm-g721-board-test~~
- ~~DSPstone-fixed-point/adpcm-g721-verify~~
- MISC/codecs_codhuff
- ~~MISC/codecs_codrle1~~
- MISC/codecs_dcodhuff
- ~~MISC/codecs_deodrle1~~
- MISC/g721_encode
- ~~MISC/g723_encode~~
- MRTC/adpcm_decoder
- MRTC/adpcm_encoder
- ~~MRTC/compressdata~~
- ~~MRTC/ere~~
- MRTC/ndes
- MediaBench/gsm
- ~~MediaBench/gsm_decode~~
- ~~MediaBench/gsm_encode~~
- MiBench/rijndael_decoder
- MiBench/rijndael_encoder
- ~~MiBench/sha~~
- ~~NetBench/md5~~
- StreamIt/audiobeam
- StreamIt/fmref

1.1 DSPstone_fixed_point/adpcm_g721_board_test

ADPCM 721 encoding and decoding of 32 samples.

REMOVE: Duplication. Not so nice license.

TODO: maybe there is some work to do.

1.2 DSPstone_fixed_point/adpcm_g721_verify

Basically the same as the above, just verifying the results.

REMOVE: Duplication of g712_board_test.

1.3 MISC/codecs_codhuff

Huffman encoding.

KEEP: Different from all ADPCM code.

TODO: Merge with dcodhuff.

1.4 MISC/codecs_codrle1

REMOVE: Too tiny. Maybe keep in kernel.

1.5 MISC/codecs_dcodhuff

Huffman encoding.

KEEP: if merged with Huffman encoding.

TODO: merge with encoding to call encoding and decoding on the data.

1.6 MISC/codecs_dcodrle1

REMOVE: too tiny. If kept as kernel, merge with codrle1.

1.7 MISC/g721_encode

ADPCM 721 encoding, similar to above. But nicer license.

KEEP: maybe.

1.8 MISC/g723_encode

REMOVE: Basically the same source as g721_encode.

1.9 MRTC/adpcm_decoder

ADPCM 722 decoding of 2 samples. Similar functionality as DSPstone, but different algorithms.

KEEP: keep, but adapt: larger sample size and merge with encoder.

1.10 MRTC/adpcm_encoder

ADPCM 722 encoding of 2 samples. Similar functionality as DSPstone, but different algorithms.

KEEP: keep, but adapt: larger sample size and merge with decoder.

1.11 MRTC/compressdata

REMOVE: too small benchmark. Maybe keep in a kernels category.

1.12 MRTC/crc

REMOVE: too small benchmark. Maybe keep in a kernels category.

1.13 MRTC/ndes

Encryption, but not clear what it exactly does and where it comes from. KEEP:
but better be in a kernel category.

TODO: need to be checked against other encryption benchmarks.

1.14 MediaBench/gsm

GSM encoding and decoding.

KEEP:

1.15 MediaBench/gsm_decode

GSM decode.

REMOVE: included in gsm.

1.16 MediaBench/gsm_encode

GSM encode.

REMOVE: included in gsm.

1.17 MiBench/rijndael_decoder

AES decoder.

KEEP: merge with encoder. Need to be checked against other en/decryption code.

1.18 MiBench/rijndael_encoder

AES encoder.

KEEP: merge with decoder. Need to be checked against other en/decryption code.

1.19 MiBench/sha

REMOVE: another crypto code, small code. Maybe keep in kernel category.

1.20 NetBench/md5

REMOVE: another small kernel. Maybe keep in kernel category.

1.21 StreamIt/audiobeam

KEEP: Looks interesting and different from the others. TODO: Find a description and the original source.

1.22 StreamIt/fmref

KEEP: Looks interesting and different from the others. Maybe this belongs to kernel category. TODO: Find a description and the original source.