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**Abstract**

In this document we provide a description of the core experiment 13.27 on predictor selection for the predicting transform scheme in TMC13.

1. **Introduction**

The goal of Core Experiment 13.27 is to investigate adaptive predictor selection for predicting transform scheme on G-PCC.

The performance of the technique [3] will be evaluated by the 3DG/PCC AhG, in terms of RD performance and computational complexity. The selected tools will be then recommended for inclusion in the PCC TMC13.

1. **Mandates**

The mandates for CE 13.27 are as follows:

* To evaluate the coding performance of the predictor selection for reflectance coding
* To investigate the score equation for rate-distortion optimization
* To study the best way to compare the attribute similarity

1. **Participants**

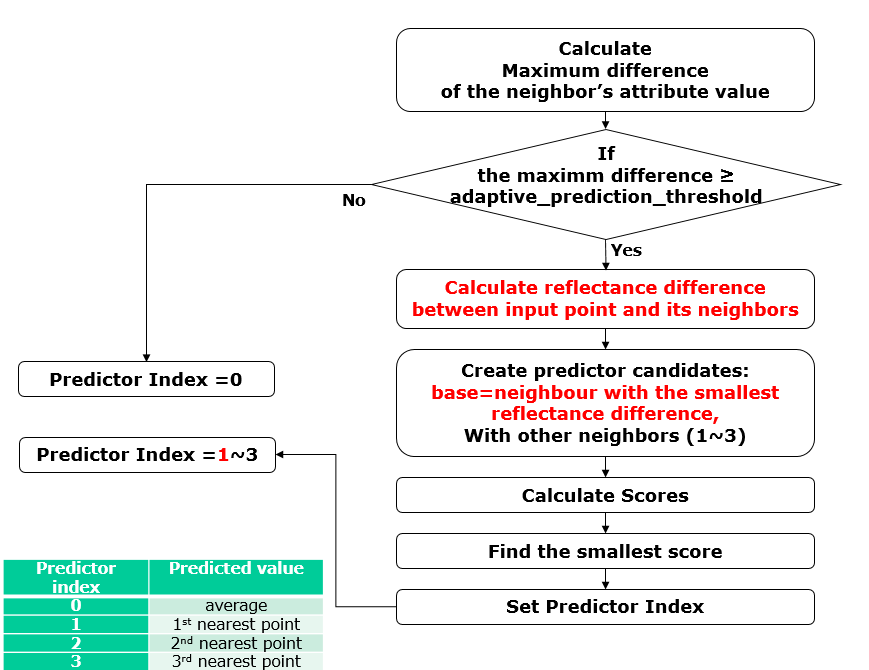
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1. **Method to be evaluated**

In contribution m50765[3], base selection for adaptive predictor selection for reflectance is proposed. The proposed method is to select the neighbor predictor candidate which has smallest difference between neighbor reflectance value and the input reflectance value instead of the weighted average predictor candidate of neighbors’ reflectance value as a base predictor candidate.

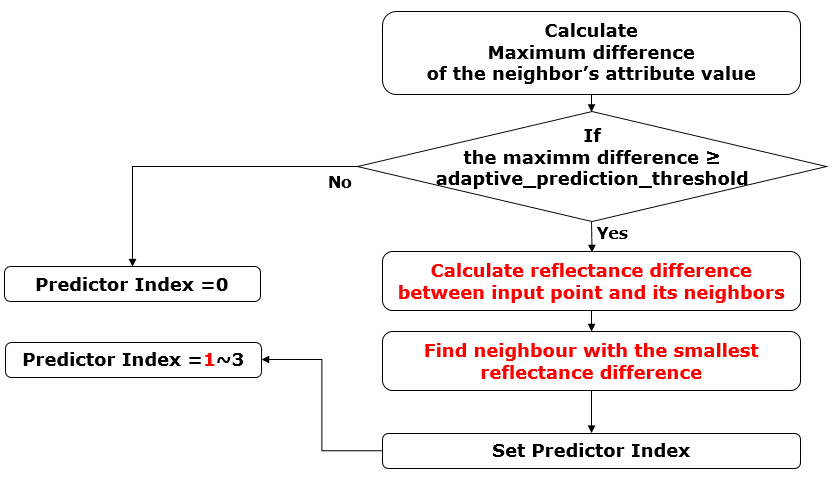
## Tool-1

The Tool-1 is to select a base predictor based on attribute similarity, and combine with current procedure for rate-distortion optimization.



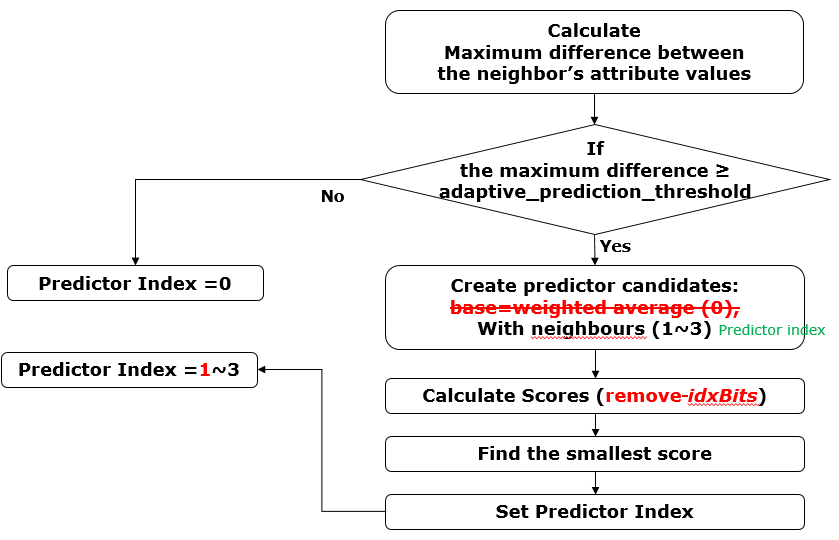
## Tool-2

The Tool-2 is to select a base predictor based on attribute similarity.



## Tool-3

The Tool-3 is not to consider average predictor as base predictor, and modify a score equation without idxBits for considering bits size of predictor index.



1. **Evaluation method**

## Test condition

Following conditions will be studied under CTC[2].

1. Test 1 : Proposed method described in Section 4.1
2. Test 2 : Proposed method described in Section 4.2
3. Test 3 : Proposed method described in Section 4.3

## Test model, anchors and CTC

The latest G-PCC reference software [X] will be used as the anchor for this CE.

All tests are to be performed using the CTC [2] on categories 1 and 3 datasets.

Results shall be reported relative to the CTC anchors.

1. **Timeline:**

* **2019-11-01**: Expected date for release of cross-verified TMC13v8 software and anchors
* **2019-12-13**: CE Software and results are released to cross-checkers
* **2019-12-20**:Preliminary feedback from cross-checkers to proponents
* **2020-01-02**: MPEG document upload deadline.

1. **References**
2. “G-PCC Test Model 8”, ISO/IEC JTC1/SC29/WG11 MPEG2019 Doc. w18882, Geneva, CH, October 2019
3. “Common Test Conditions for PCC” ISO/IEC JTC1/SC29 WG11 MPEG2019”, ISO/IEC JTC1/SC29/WG11 MPEG2019 Doc. w18883, Geneva, CH, October 2019
4. “[G-PCC][New Proposal] on improvement for adaptive reflectance predictor selection”, ISO/IEC JTC1/SC29 WG11 (MPEG) input document m50765, Geneva, CH, October 2019