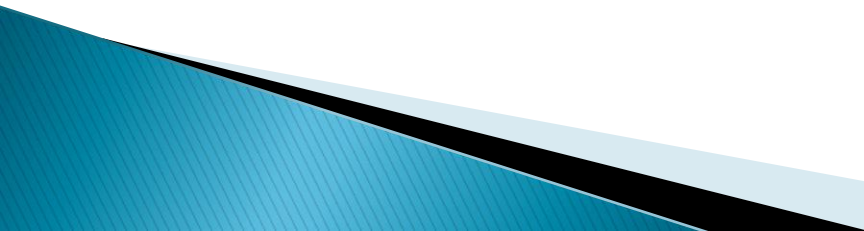


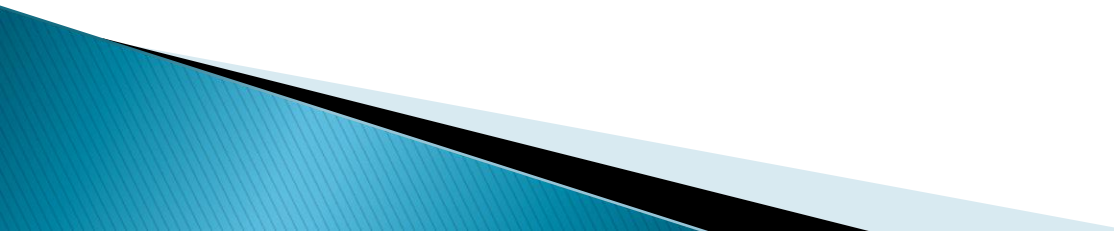
Proposal of the criteria of decoder selection for considering various decoder implementations on P.NAMS and P.NBAMS

NTT
Keishiro Watanabe
Jun Okamoto

Background

- ▶ The models on P.NAMS and P.NBAMS, which estimate subjective video quality by using only stream information, can't use decoded pixel information.
 - ▶ Therefore, P.NAMS and P.NBAMS can't consider detailed decoder implementations intrinsically such as post filters, error concealments, and so on.
 - ▶ However, decoder implementations have large influence on subjective video quality.
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Proposal

- ◆ We propose a method for considering the effect of difference by decoder implementations such as post filters, error concealments, and so on.
 - ◆ We suppose that we have two options.
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Option 1

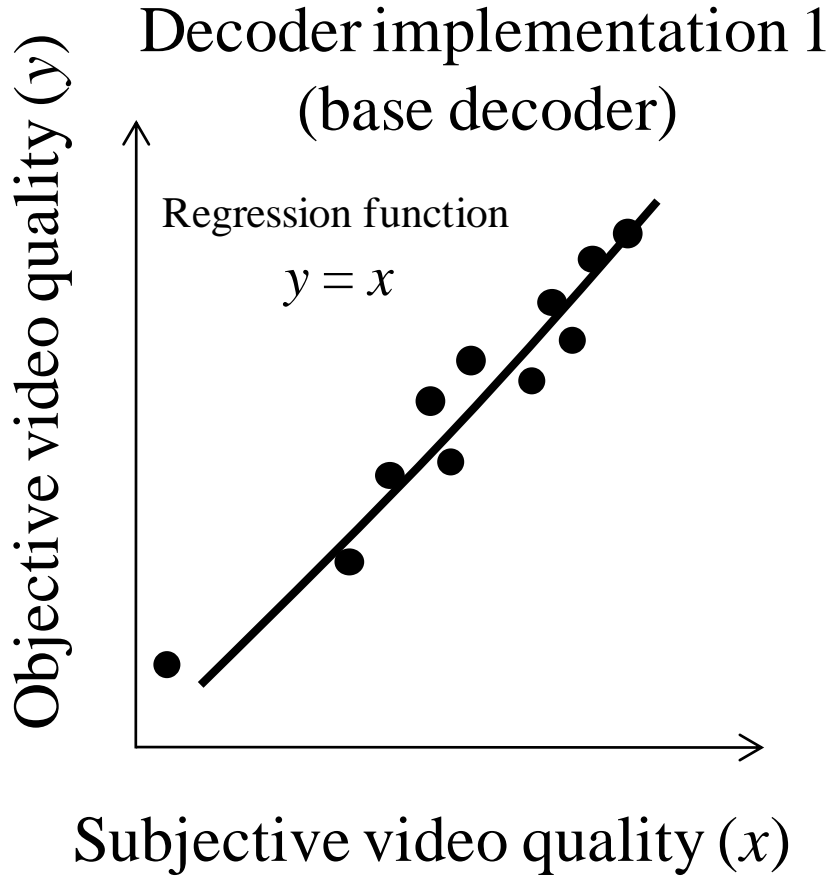
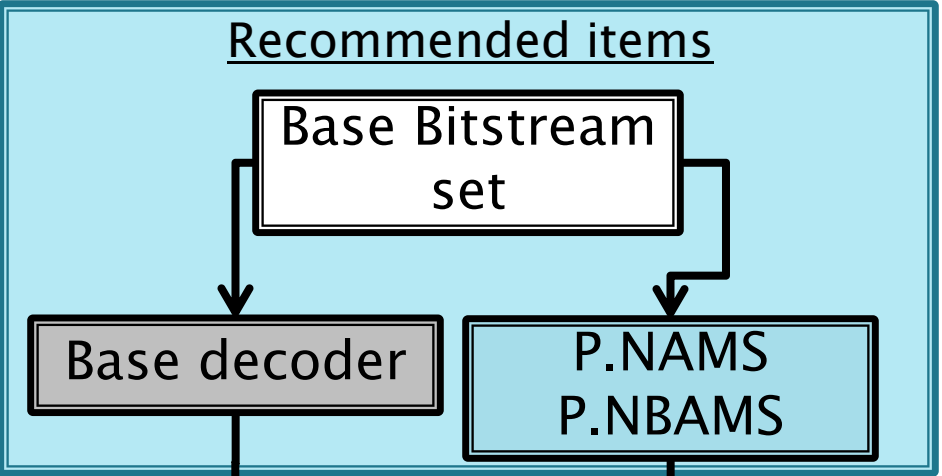
- We use many kinds of decoders as possible to produce video sequences for subjective video quality assessments. These decoders will be selected by VQEG or each organization that conducts subjective assessment.
- This procedure enables recommended model to estimate average characteristics of these decoders
 - Merit:
 - ✓ Simple and high flexibility about selecting decoders
 - ✓ Similar to multimedia project
 - Demerit:
 - ✓ Bias of decoder types
 - ✓ A little complex subjective testing

Option 2

- We select the single type or a few types of decoders to produce video sequences for subjective video quality assessments.
- These decoders will be selected by VQEG. We recommend to use ffdshow, which is open source, highly functional, and widely used.
- Moreover, we add the method for correcting difference between decoder implementations in a recommendation.
 - Merit:
 - ✓ Easy Handling of new decoder implementations
 - ✓ Very simple subjective testing
 - Demerit:
 - ✓ Decision of target decoders
 - ✓ Decision of the method for correcting difference between decoder implementations

Example of correcting method (option 2)

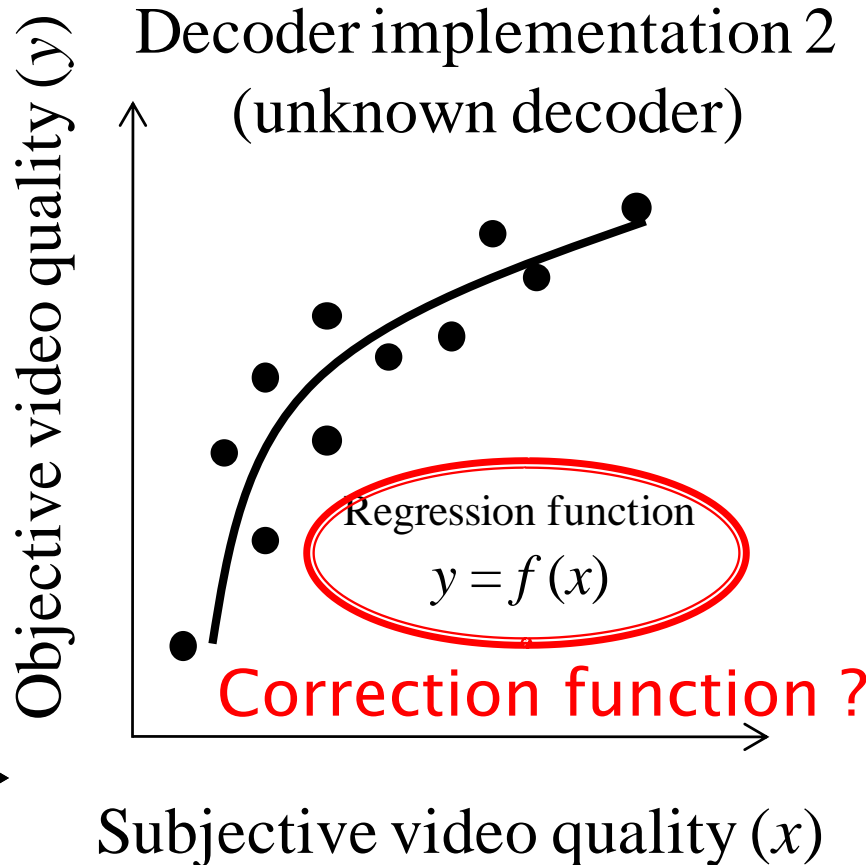
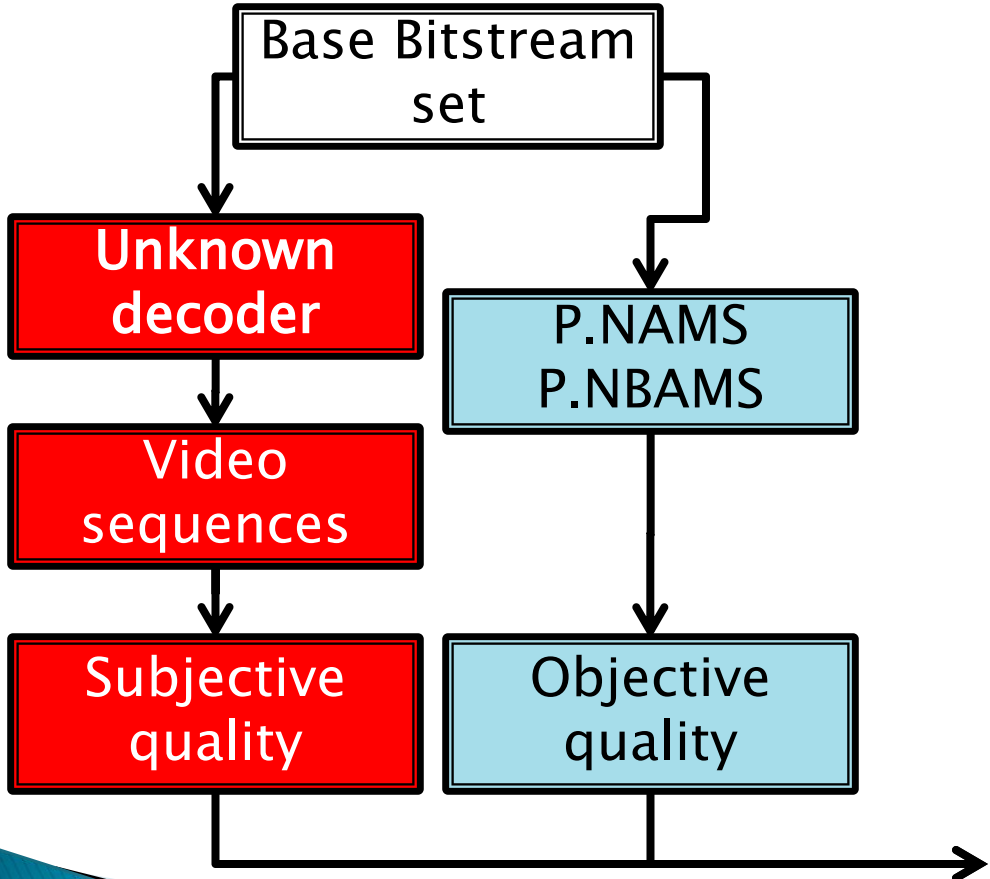
Tuning phase



The model on P.NAMS or P.NAMS is tuned to base bitstream set and base decoder

Example of correcting method (option 2)

Correction phase



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- ▶ We recommend to use option 2.
 - ▶ The model on P.NAMS and P.NBAMS cannot take decoder implementations into account intrinsically .
 - ▶ It's more reasonable to select one or a few decoders and consider the correcting method of decoder implementations than to use many kinds of decoders as option1.