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Abstract

In VSEI v4, a new purpose has been added to the NNPFC SEI message, related to temporal extrapolation. This feature allows the NNPF to generate one or more extrapolated pictures that follow all input pictures of the NNPF in output order. However, with current draft syntax, it is not possible to generate more than one temporally extrapolated picture per time instance, which may be an important feature for picture extrapolation applications where multiple hypotheses may be generated for the same temporal position.

This contribution suggests considering extending the temporal extrapolation purpose of the NNPFC SEI message to support generating multiple temporally extrapolated picture per time instance.

Introduction

In VSEI v4, a new purpose has been added to the NNPFC SEI message, related to temporal extrapolation. This feature allows the NNPF to generate one or more extrapolated pictures that follow all input pictures of the NNPF in output order. Example use cases are very low delay computer vision applications (e.g. robotics, autonomous driving) to facilitate anticipatory decision making, or very low-latency applications (e.g. cloud gaming) to anticipate the rendering by emulating several hypotheses of actions.

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ABSTRACT

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