~~**WHAT IS CLAIMED IS:**~~

CLAIMS

1.——— A method of decoding a sequence of video data that includes a plurality of pictures, the method comprising:
——— decoding a first syntax element that indicates whether a first decoder-side refinement tool is enabled or disabled for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;
determining ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the first syntax element;
decoding a second syntax element that indicates whether a second decoder-side refinement tool is enabled or disabled for the first ~~subset~~portion of ~~video data~~the first picture, wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the ~~sequence~~plurality of ~~video data;~~ pictures; determining ~~whether~~that the second decoder-side refinement tool is ~~enabled or~~ disabled for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the ~~first~~second syntax element;
~~decoding the first subset of video data using the first decoder-side refinement tool in response to the first decoder-side refinement tool being enabled for the first subset;~~
and decoding the first ~~subset~~portion of ~~video data without~~the first picture using the first decoder- side refinement tool in response to determining that the first decoder-side refinement tool ~~being disabled~~is enabled for the first ~~subset;~~
~~decoding~~portion of the first ~~subset of video data using~~picture and in response to determining that the second decoder- side refinement tool ~~in response to the second decoder-side refinement tool being enabled~~is disabled for the first ~~subset; and~~
~~decoding~~portion of the first ~~subset of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the first subset.~~picture.

2.——— The method of claim 1, wherein the first decoder-side refinement tool comprises a decoder-side motion vector refinement (DMVR) tool and wherein the second decoder-side refinement tool comprises a bi-directional optical flow (BDOF) tool.

3.——— The method of claim 1, wherein decoding the first syntax element comprises decoding a first instance of the first syntax element and wherein decoding the second syntax element comprises decoding a first instance of the second syntax element, the method further comprising:
——— decoding a second instance of the first syntax element that indicates whether the first decoder-side refinement tool is enabled or disabled for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the second ~~subset~~picture among the plurality of pictures is different than the first ~~subset;~~ picture among the plurality of pictures; determining ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for the first portion of the second ~~subset of video data~~picture based on a value of the second instance of the first syntax element;

decoding a second instance of the second syntax element that indicates whether the second decoder-side refinement tool is enabled or disabled for the first portion of the second subset of video datapicture among the plurality of pictures within the sequence of video data;
determining whetherthat the second decoder-side refinement tool is enabled or disabled for the first portion of the second subset of video datapicture based on a value of the second instance of the second syntax element;
and decoding the first portion of the second subset of video datapicture using the firstsecond decoder-side refinement tool in response to determining that the first decoder-side refinement tool being enabled for the second subset;
decodingis disabled and the second subset of video data without using the first decoder-side refinement tool in response to the first decoder-side refinement tool being disabled for the second subset;
decoding the second subsetis enabled for the first portion of video data using the second decoder-side refinement tool in response topicture among the second decoder-side refinement tool being enabled for the second subset; and
decoding the second subsetplurality of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the second subset.pictures.

4. The method of claim 3, further comprising:
decoding a third instance of the first syntax element that indicates whether the first decoder-side refinement tool is enabled or disabled for a first portion of a third subset of video datapicture among the plurality of pictures within the sequence of video data, wherein the third subsetpicture is different than the first subsetpicture and the third subsetpicture is different than the second subset;
picture; determining whetherthat the first decoder-side refinement tool is enabled or disabled for the first portion of the third subset of video datapicture based on a value of the third instance of the first syntax element;
decoding a third instance of the second syntax element that indicates whether the second decoder-side refinement tool is enabled or disabled for the first portion of the third subset of video datapicture among the plurality of pictures within the sequence of video data;
determining whetherthat the second decoder-side refinement tool is enabled or disabled for the first portion of the third subset of video datapicture based on a value of the third instance of the second syntax element;
and decoding the third subset of video data using the first decoder-side refinement tool in response to the first decoder-side refinement tool being enabled for the third subset;
decoding the third subset of video data without using the first decoder-side refinement tool in response to portion of the third picture using the first decoder-side refinement tool being disabled for the third subset;
decoding the third subset of video data using and the second decoder-side refinement tool in response to the second decoder-side refinement tool being enabled for the third subset; and
decoding the third subset of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the third subset.

~~5. The method of claim 3, further comprising:~~
determining that the first decoder-side refinement tool is enabled for the first ~~subset of video data~~portion of the third picture and the second decoder-side refinement tool is enabled for the first portion of the third picture.

5. The method of claim 1, further comprising: determining that the first decoder-side refinement tool is enabled for the first portion of the first picture among the plurality of pictures based on a value of ~~the~~a first instance of the first syntax element;
~~determining that the second decoder-side refinement tool is disabled for the first subset of video data based on a value of the first instance of the second syntax element;~~
~~decoding the first subset of video data using the first decoder-side refinement tool and without using the second decoder-side refinement tool;~~
~~determining that the first decoder-side refinement tool is disabled for the second subset of video data based on a value of the second instance of the first syntax element;~~
and determining that the second decoder-side refinement tool is ~~enabled~~disabled for the ~~second subset of video data~~first portion of the first picture among the plurality of pictures based on a value of ~~the second~~a first instance of the second syntax element~~; and~~
~~decoding the second subset of video data using the second decoder-side refinement tool and without using the first decoder-side refinement tool~~.

6. The method of claim 1, wherein the first and second decoder-side refinement tools are available for decoding any of the plurality of pictures of the sequence of video data, wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets~~portions of ~~video data~~pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets of video data~~portions of pictures among the plurality of pictures within the sequence of video data.

7. The method of claim 1, further comprising:
decoding one or more syntax elements associated with the sequence of video data; and
determining, based on the one or more syntax elements associated with the sequence of video data, that the first and second decoder-side refinement tools are enabled for the sequence of video data so as to be available for decoding the plurality of pictures of the sequence of video data.

8. The method of claim 1, wherein the first ~~subset comprises at least a~~portion of ~~a~~the first picture ~~among the plurality of pictures of the sequence of video data.~~

~~9. The method of claim 8, wherein the first subset of video data within the sequence of video data~~ comprises one ~~or more~~ of:
a slice of video data;
a frame of video data;
a picture among the plurality of pictures of the sequence of video data;

a sub-picture of video data; and
a block of video data.

~~10.~~ 9. A method of encoding a sequence of video data that includes a plurality of pictures, the method comprising:
~~———~~ encoding a first instance of a first syntax element to identify ~~whether~~that a first decoder-side refinement tool is enabled ~~or disabled~~ for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;
~~———~~ encoding a second instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the second ~~subset~~picture is different than the first ~~subset;~~
~~———~~picture, and wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures; encoding a first instance of a second syntax element to identify ~~whether~~that a second decoder-side refinement tool is ~~enabled or~~ disabled for ~~a~~the first ~~subset~~portion of ~~video data~~the first picture among the plurality of pictures within the sequence of video data; and
~~———~~ encoding a second instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for ~~a~~the first portion of the second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data.

~~11.~~ 10. The method of claim ~~10~~9, wherein the first decoder-side refinement tool comprises a decoder-side motion vector refinement (DMVR) tool and wherein the second decoder-side refinement tool comprises a bi-directional optical flow (BDOF) tool.

~~12.~~ 11. The method of claim ~~10~~9, further comprising:
~~———~~ encoding a third instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for a ~~third subset~~first portion of ~~video data~~a third picture among the plurality of pictures within the sequence of video data, wherein the third ~~subset~~picture is different than the first picture subset and the third ~~subset~~picture is different than the second ~~subset~~picture; and
~~———~~ encoding a third instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for the first portion of the third ~~subset~~picture among the plurality of ~~video data~~pictures within the sequence of video data.

~~13.~~ 12. The method of claim ~~10~~9, wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets of video data~~portions of pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets~~portions of ~~video data~~pictures among the plurality of pictures within the sequence of video data.

~~14.~~ 13. The method of claim ~~10~~9, further comprising:

encoding one or more syntax elements associated with the sequence of video data to indicate that the first and second decoder-side refinement tools are ~~available for decoding the plurality of pictures of~~ enabled for the sequence of video data,
wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets of video data~~ portions of pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets of video data~~ portions of pictures among the plurality of pictures within the sequence of video data.

~~15.~~ 14. The method of claim ~~10~~9, wherein the first ~~subset comprises at least a~~ portion of ~~a~~the first picture among the plurality of pictures ~~of the sequence of video data.~~

~~16. The method of claim 15, wherein the first subset of video data within the sequence of video data~~ comprises one or more of:
a slice;
a frame;
a picture;
a sub-picture; and
a block.

~~17.~~ 15. A video decoding device comprising:

a memory configured to store a sequence of video data that includes a plurality of pictures; and

processing ~~circuitry~~circuitry configured to:

decode a first syntax element that indicates whether a first decoder-side refinement tool is enabled or disabled for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;
determine ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the first syntax element;
decode a second syntax element that indicates whether a second decoder-side refinement tool is enabled or disabled for the first ~~subset~~portion of ~~video data~~the first picture among the plurality of pictures with the sequence of video data~~;~~
wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures;
determine ~~whether~~that the second decoder-side refinement tool is ~~enabled or~~ disabled for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the ~~first~~second syntax element;
and decode the first ~~subset~~portion of ~~video data~~the first picture using the first decoder~~-~~ side refinement tool in response to ~~the first decoder-side refinement tool being enabled for the first subset;~~

~~decode the first subset of video data without using the first decoder-side refinement tool in response to~~ determining that the first decoder-side refinement tool ~~being disabled for the first subset;~~

~~decode the first subset of video data using~~is enabled and in response to determining that the second decoder- side refinement tool ~~in response to the second decoder-side refinement tool being enabled for the first subset; and~~

~~decode~~ is disabled for the portion of the first ~~subset of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the first subset.~~picture.

~~18.~~ 16. The video decoding device of claim ~~17~~15, wherein the first decoder-side refinement tool comprises a decoder-side motion vector refinement (DMVR) tool and wherein the second decoder-side refinement tool comprises a bi-directional optical flow (BDOF) tool.

~~19.~~ 17. The video decoding device of claim ~~17~~15, wherein the processing circuitry is configured to decode the first syntax element by decoding a first instance of the first syntax element and to decode the second syntax element by decoding a first instance of the second syntax element, the processing ~~circuity~~circuitry being further configured to:

~~———~~ decode a second instance of the first syntax element that indicates whether the first decoder-side refinement tool is enabled or disabled for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the second ~~subset~~picture is different than the first ~~subset;~~

picture; determine ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for the first portion of the second ~~subset of video data~~picture based on a value of the second instance of the first syntax element;

~~———~~decode a second instance of the second syntax element that indicates whether the second decoder-side refinement tool is enabled or disabled for the first portion of the second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data;

determine ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for the first portion of the second ~~subset of video data~~picture based on a value of the second instance of the second syntax element;

and decode the first portion of the second ~~subset of video data~~picture using the ~~first~~second decoder-side refinement tool in response to determining that the first decoder-side refinement tool ~~being enabled for the second subset;~~

~~decode~~is disabled and the second ~~subset of video data without using the first~~ decoder-side refinement tool ~~in response to the first decoder-side refinement tool being disabled for the second subset;~~

~~decode the second subset~~is enabled for the first portion of ~~video data using~~ the second ~~decoder-side refinement tool in response to the second decoder-side refinement tool being enabled for the second subset; and~~

~~decode the second subset of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the second subset.~~picture.

~~20.~~ 18. The video ~~decoding~~coding device of claim ~~19~~17, wherein the processing circuitry is further configured to:
decode a third instance of the first syntax element that indicates whether the first decoder-side refinement tool is enabled or disabled for a first portion of a third ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the third ~~subset~~picture is different than the first ~~subset~~picture and the third ~~subset~~picture is different than the second ~~subset;~~
picture; determine ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for the first portion of the third ~~subset of video data~~picture based on a value of the third instance of the first syntax element;
~~———~~decode a third instance of the second syntax element that indicates whether the second decoder-side refinement tool is enabled or disabled for the first portion of the third ~~subset of video data~~picture among the plurality of pictures within the sequence of video data;
determine ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for the first portion of the third ~~subset of video data~~picture based on a value of the third instance of the second syntax element;
and decode the first portion of the third ~~subset of video data~~picture using the first decoder-side refinement tool ~~in response to the first decoder-side refinement tool being enabled for the third subset;~~
~~decode the third subset of video data without using the first decoder-side refinement tool in response to the first decoder-side refinement tool being disabled for the third subset;~~
~~decode the third subset of video data using~~and the second decoder-side refinement tool in response to ~~the~~ determining that the first decoder-side refinement tool is enabled for the first portion of the third picture and in response to determining that the second decoder-side refinement tool ~~being~~is enabled for the ~~third subset; and~~
~~decode~~first portion of the third ~~subset of video data without using the second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the third subset.~~picture.

~~21.~~ 19. The video decoding device of claim ~~19~~15, wherein the processing circuitry is configured to:
determine that the first decoder-side refinement tool is enabled for the first ~~subset of video data~~portion of the first picture among the plurality of pictures based on a value of ~~the~~a first instance of the first syntax element;
determine that the second decoder-side refinement tool is disabled for the first ~~subset of video data~~portion of the first picture among the plurality of pictures based on a value of ~~the~~a first instance of the second syntax element~~;~~
~~decode the first subset of video data using the first decoder-side refinement tool and without using the second decoder-side refinement tool;~~
~~determine that the first decoder-side refinement tool is disabled for the second subset of video data based on a value of the second instance of the first syntax element;~~
~~determine that the second decoder-side refinement tool is enabled for the second subset of video data based on a value of the second instance of the second syntax element; and~~

~~decode the second subset of video data using the second decoder-side refinement tool and without using the first decoder-side refinement tool~~.

~~22.~~ 20. The video decoding device of claim ~~17~~15, wherein the first and second decoder-side refinement tools are available for decoding any of the plurality of pictures of the sequence of video data, wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets~~portions of ~~video data~~the pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets of video data~~portions of pictures among the plurality of pictures within the sequence of video data.

~~23.~~ 21. The video decoding device of claim ~~17~~15, wherein the processing circuitry is further configured to:

~~———~~ decode one or more syntax elements associated with the sequence of video data; and

~~———~~determine, based on the one or more syntax elements associated with the sequence of video data, that the first and second decoder-side refinement tools are enabled for the sequence of video data so as to be available for decoding the plurality of pictures of the sequence of video data.

~~24.~~ 22. The video decoding device of claim 17, wherein the first ~~subset comprises at least a~~ portion of ~~a~~the first picture ~~among the plurality of pictures of the sequence of video data.~~

~~25. The video decoding device of claim 24, wherein the first subset of video data within the sequence of video data~~ comprises one ~~or more~~ of:

a slice of video data;

a frame of video data;

a picture among the plurality of pictures of the sequence of video data;

a sub-picture of video data; and

a block of video data.

~~26.~~ 23. A video encoding device comprising:

~~———~~ a memory configured to store a sequence of video data that includes a plurality of pictures; and

~~———~~ processing ~~circuity~~circuitry configured to:

encode a first instance of a first syntax element to identify ~~whether~~that a first decoder-side refinement tool is enabled ~~or disabled~~ for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;

~~———~~ encode a second instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the second ~~subset~~picture is different than the first ~~subset;~~

~~———~~picture, and wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality

of pictures; encode a first instance of a second syntax element to identify ~~whether~~that a second decoder-side refinement tool is ~~enabled or~~ disabled for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data; and

~~———~~ encode a second instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data.

~~27~~ ~~——~~24. The video encoding device of claim ~~26~~23, wherein the first decoder-side refinement tool comprises a decoder-side motion vector refinement (DMVR) tool and wherein the second decoder-side refinement tool comprises a bi-directional optical flow (BDOF) tool.

~~28.~~ ~~——~~25. The video encoding device of claim ~~26~~23, wherein the processing ~~circuitry~~circuitry is further configured to:

encode a third instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for a ~~third subset~~first portion of ~~video data~~a third picture among the plurality of pictures within the sequence of video data, wherein the third ~~subset~~picture is different than the first ~~subset~~picture and the third ~~subset~~picture is different than the second ~~subset~~picture; and

~~———~~ encode a third instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for the first portion of the third ~~subset of video data~~picture among the plurality of pictures within the sequence of video data.

~~29.~~ ~~——~~26. The video encoding device of claim ~~26~~23, wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets of video data~~portions of pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets~~portions of ~~video data~~pictures among the plurality of pictures within the sequence of video data.

~~30.~~ ~~——~~27. The video encoding device of claim ~~26~~23, wherein the processing ~~circuitry~~circuitry is further configured to:

~~———~~ encode one or more syntax elements associated with the sequence of video data to indicate that the first and second decoder-side refinement tools are ~~available for decoding the plurality of pictures of~~ enabled for the sequence of video data,

wherein one or both the first and second decoder-side refinement tools are enabled for some ~~subsets of video data~~portions of pictures among the plurality of pictures within the sequence of video data, and wherein one or both of the first and second decoder-side refinement tools are disabled for other ~~subsets of video data~~ portions of pictures among the plurality of pictures within the sequence of video data.

~~31.~~ ~~——~~28. The video encoding device of claim ~~26~~23, wherein the first ~~subset comprises at least a~~ portion of ~~a~~the first picture ~~among the plurality of pictures of the sequence of video data.~~

~~32. The video encoding device of claim 31, wherein the first subset of video data within the sequence of video data~~ comprises one ~~or more~~ of:
~~a~~ a slice;
~~a~~ a frame;
a picture;
a sub-picture; and
~~a~~ a block.

~~33.~~ 29. A video decoding device configured to decode a sequence of video data that includes a plurality of pictures, the video decoding device comprising:

~~means~~ means for decoding a first syntax element that indicates whether a first decoder-side refinement tool is enabled or disabled for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;
means for determining ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the first syntax element;
means for decoding a second syntax element that indicates whether a second decoder-side refinement tool is enabled or disabled for the first ~~subset~~portion of ~~video data~~the first picture among the plurality of pictures with the sequence of video data~~;~~
, wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures; means for determining ~~whether~~that the second decoder-side refinement tool is ~~enabled or~~ disabled for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the ~~first~~second syntax element;
means for decoding the first ~~subset~~portion of ~~video data~~the first picture using the first decoder~~-~~ side refinement tool in response to ~~the first decoder-side refinement tool being enabled for the first subset;~~
~~means for decoding the first subset of video data without using the first decoder-side refinement tool in response to~~ determining that the first decoder-side refinement tool ~~being disabled for the first subset;~~
~~means for decoding the first subset of video data using~~is enabled and in response to determining that the second decoder~~-~~ side refinement tool ~~in response to the second decoder-side refinement tool being enabled~~is disabled for the first ~~subset; and~~
~~means for decoding the subset~~portion of ~~video data without using~~the first picture among the ~~second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the first subset.~~plurality of pictures.

~~34.~~ 30. A video encoding device configured to encode a sequence of video data that includes a plurality of pictures, the video encoding device comprising:

~~means~~ means for encoding a first instance of a first syntax element to identify ~~whether~~that a first decoder-side refinement tool is enabled ~~or disabled~~ for a first ~~subset~~portion of ~~video data~~a first picture among the plurality of pictures within the sequence of video data;

~~———~~ means for encoding a second instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for a first portion of a second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data, wherein the second ~~subset~~picture is different than the first ~~subset;~~

~~———~~picture, and wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures; means for encoding a first instance of a second syntax element to identify ~~whether~~that a second decoder-side refinement tool is ~~enabled or~~ disabled for a first ~~subset~~portion of ~~video data~~a second picture among the plurality of pictures within the sequence of video data; and

~~———~~ means for encoding a second instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for ~~a~~the first portion of the second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data.

~~35.~~ 31. A non-transitory computer-readable storage medium storing instructions that, when executed, cause one or more processors of a video decoding device to:

decode a first syntax element that indicates whether a first decoder-side refinement tool is enabled or disabled for a first ~~subset~~portion of ~~video data~~a first picture among a plurality of pictures within a sequence of video data~~, wherein the sequence of video data that includes a plurality of pictures;~~

; determine ~~whether~~that the first decoder-side refinement tool is enabled ~~or disabled~~ for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the first syntax element;

decode a second syntax element that indicates whether a second decoder-side refinement tool is enabled or disabled for the first ~~subset~~portion of ~~video data~~the first picture among the plurality of pictures with the sequence of video data~~;~~

~~determine whether~~, wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures; determine that the second decoder-side refinement tool is ~~enabled or~~ disabled for the first ~~subset~~portion of ~~video data~~the first picture based on a value of the ~~first~~second syntax element;

decode the first ~~subset~~portion of ~~video data~~the first picture using the first decoder~~-~~ side refinement tool in response to ~~the first decoder-side refinement tool being enabled for the first subset;~~

~~decode the first subset of video data without using the first decoder-side refinement tool in response to~~ determining that the first decoder-side refinement tool ~~being disabled for the first subset;~~

~~decode the first subset of video data using~~is enabled and in response to determining that the second decoder~~-~~ side refinement tool ~~in response to the second decoder-side refinement tool being enabled~~is disabled for the first ~~subset; and~~

~~decode the subset~~portion of ~~video data without using~~the first picture among the ~~second decoder-side refinement tool in response to the second decoder-side refinement tool being disabled for the first subset.~~plurality of pictures.

~~36.~~ 32. A non-transitory computer-readable storage medium storing instructions that, when executed, cause one or more processors of a video encoding device to:

encode a first instance of a first syntax element to identify ~~whether~~that a first decoder-side refinement tool is enabled ~~or disabled~~ for a first ~~subset~~portion of ~~video data~~a first picture among a plurality of pictures within a sequence of video data ~~wherein the sequence of video data that includes a plurality of pictures;~~

~~;~~ encode a second instance of the first syntax element to identify ~~whether~~that the first decoder-side refinement tool is ~~enabled or~~ disabled for a first portion of a second ~~subset~~picture among the plurality of ~~video data~~pictures within the sequence of video data, wherein the second ~~subset~~picture is different than the first ~~subset;~~

~~picture, and wherein the first decoder side-refinement tool and the second decoder-side refinement tool are enabled for refining motion information associated with the plurality of pictures;~~ encode a first instance of a second syntax element to identify ~~whether~~that a second decoder-side refinement tool is ~~enabled or~~ disabled for ~~a~~the first ~~subset~~portion of ~~video data~~the first picture among the plurality of pictures within the sequence of video data; and

~~encode a second instance of the second syntax element to identify ~~whether~~that the second decoder-side refinement tool is enabled ~~or disabled~~ for ~~a~~the first portion of the second ~~subset of video data~~picture among the plurality of pictures within the sequence of video data.