SUMMARY

[0005] A summary of certain embodiments disclosed herein is set forth below. It should be understood that these aspects are presented merely to provide the reader with a brief summary of these certain embodiments and that these aspects are not intended to limit the scope of this disclosure. Indeed, this disclosure may encompass a variety of aspects that may not be set forth below.

[0006] According to a first aspect, there is provided a computer program product embodied on a non-transitory computer readable medium, said computer readable medium having instructions stored thereon that, when executed by a computer, which implements or operates in conjunction with at least one classification and/or segmentation processor, causes the computer to perform: receive modelled seismic data including modelled aliased data and modelled unaliased data; train the at least one classification and/or segmentation processor to identify characteristics of the modelled aliased data in the modelled seismic data; receive actual seismic data after training the at least one classification and/or segmentation processor, wherein the actual seismic data includes aliasing, and wherein the actual seismic data is represented within the transform domain; identify, using the trained at least one classification and/or segmentation processor, aliased data in the actual seismic data; and correct the actual seismic data for the aliasing by performing at least one: remove the aliased data from the actual seismic data using a mask; or reposition a position of the aliased data in the transform domain.

[0006a] According to a second aspect, there is provided a method including: receiving, by at least one classification and/or segmentation processor, modelled seismic data including modelled aliased data and modelled unaliased data; training the at least one classification and/or segmentation processor to identify characteristics of the modelled aliased data in the modelled seismic data; receiving actual seismic data after training the at least one classification and/or segmentation processor, wherein the actual seismic data includes aliasing, and wherein the actual seismic data is represented within the transform domain; identifying, using the trained at least one classification and/or segmentation processor, aliased data in the actual seismic data; and correcting the actual seismic data for the aliasing by performing at least one: removing the aliased data from the actual seismic data using a mask; or repositioning a position of the aliased data in the transform domain.

[0007] With one or more embodiments, a method can include receiving actual seismic data. The received actual seismic data includes aliasing that is to be identified by at least one trained classification and/or segmentation processor. The received actual seismic data comprises data represented within a transform domain. The method can also include generating an output via the at least one trained classification and/or segmentation processor based on the received actual seismic data. The method can also include generating a mask based on the output. The method can also include removing aliasing from the received actual seismic data using the generated mask. With one or more embodiments, the at least one trained classification and/or segmentation processor can be trained on modelled data. After the at least one trained classification and/or segmentation processor is trained on modelled

CLAIMS

1. A computer program product embodied on a non-transitory computer readable medium, said computer readable medium having instructions stored thereon that, when executed by a computer, which implements or operates in conjunction with at least one classification and/or segmentation processor, causes the computer to perform:

receive modelled seismic data including modelled aliased data and modelled unaliased data;

train the at least one classification and/or segmentation processor to identify characteristics of the modelled aliased data in the modelled seismic data;

receive actual seismic data after training the at least one classification and/or segmentation processor, wherein the actual seismic data includes aliasing, and wherein the actual seismic data is represented within the transform domain;

identify, using the trained at least one classification and/or segmentation processor, aliased data in the actual seismic data; and

correct the actual seismic data for the aliasing by performing at least one:

remove the aliased data from the actual seismic data using a mask; or

reposition a position of the aliased data in the transform domain.

2. The computer program product of claim 1, the instructions further cause the computer to project the modelled seismic data into the Fourier domain.

3. The computer program product of claim 1, wherein the at least one classification and/or segmentation processor is implemented by a multi-layer perceptron and/or a neural network.

4. The computer program product of claim 1, wherein, to train the at least one classification and/or segmentation processor to identify characteristics of the modelled aliased data, the instructions further cause the computer to:

label the modeled aliased data as aliased; and

label the aliased data as aliased.

5. The computer program product of claim 1, wherein the instructions further cause the computer to perform an inverse Fourier transform on the actual seismic data after correcting the actual seismic data for the aliasing.

6. The computer program product of claim 5, wherein the received modelled data is decimated modelled data, and aliasing is introduced into the modelled data after the decimating.

7. A method comprising:

receiving, by at least one classification and/or segmentation processor, modelled seismic data including modelled aliased data and modelled unaliased data;

training the at least one classification and/or segmentation processor to identify characteristics of the modelled aliased data in the modelled seismic data;

receiving actual seismic data after training the at least one classification and/or segmentation processor, wherein the actual seismic data includes aliasing, and wherein the actual seismic data is represented within the transform domain;

identifying, using the trained at least one classification and/or segmentation processor, aliased data in the actual seismic data; and

correcting the actual seismic data for the aliasing by performing at least one:

removing the aliased data from the actual seismic data using a mask; or

repositioning a position of the aliased data in the transform domain.

8. The method of claim 7, further comprising projecting the modelled seismic data into the Fourier domain.

9. The method of claim 7, wherein the at least one classification and/or segmentation processor is implemented by a multi-layer perceptron and/or a neural network.

10. The method of claim 7, wherein training the at least one classification and/or segmentation processor to identify the characteristics of the modelled aliased data in the modelled seismic data comprises:

labelling the modeled aliased data as aliased; and

labelling the aliased data as aliased.

11. The method of claim 7, further comprising performing an inverse Fourier transform on the actual seismic data after correcting the actual seismic data for the aliasing.

12. The method of claim 11, wherein the received modelled data is decimated modelled data, and aliasing is introduced into the modelled data after the decimating.