

19. The apparatus of claim 17, wherein:

the characterization module includes a sensor in communication with the conversion module, the sensor being configured to send a measurement signal associated with a plurality of operational characteristics of the mechanical device,

the conversion module being configured to produce the parametric data set associated with the mechanical device based on the measurement signal, the parametric data set including at least two of a detent, a peak force, a dead band parameter, a friction parameter, a symmetry parameter, a click location, a velocity dependence, and an audio parameter.

20. The apparatus of claim 17, further comprising:

a controller in communication with the design module,

the characterization module including a sensor in communication with the conversion module, the sensor being configured to send a measurement signal based on the haptic output by the haptic device,

the conversion module configured to modify the at least one parametric data set associated with the at least one user command to produce a modified parametric data set based on the measurement signal,

the controller configured to send a signal based on the modified parametric data set and operative to cause the haptic device to output a haptic effect associated with the modified parametric data set.

21. The apparatus of claim 17, further comprising:

a characterization module configured to receive data associated with the plurality of operational characteristics of the mechanical device; and

a conversion module in communication with the characterization module and the design module, the conversion module configured to automatically produce, without user intervention, the at least one parametric data set based on the data.

22. The apparatus of claim 17, further comprising:

a characterization module configured to receive data associated with the plurality of operational characteristics of the mechanical device; and

a conversion module in communication with the characterization module and the design module, the conversion module configured to automatically produce, without user intervention, the at least one parametric data set based on the data,

the data associated with the plurality of operational characteristics of the mechanical device being at least one of analog data and digital data; and

the at least one parametric data set associated with the mechanical device being digital data.

23. A method, comprising:

producing a user interface associated with a library having a plurality of predefined parametric data sets, each parametric data set from the plurality of predefined parametric data sets being uniquely associated with a haptic output from a plurality of haptic outputs;

receiving a user command associated with the user interface; and

sending a test based on the user command and operative to cause a haptic device to output a haptic output associated with a plurality of operational characteristics associated with a perceptual experience of a mechanical device.

24. The method of claim 23, wherein:

the plurality of operational characteristics associated with the mechanical device is based on a measurement of the mechanical device, and

the haptic output is operative to substantially simulate the plurality of operational characteristics of the mechanical device.

25. The method of claim 23, further comprising:

receiving a measurement signal associated with the plurality of operational characteristics of the mechanical device; and

producing data associated with the plurality of operational characteristics of the mechanical device based on the measurement signal, the plurality of operational characteristics including at least two of a detent, a peak force, a dead band parameter, a friction parameter, a symmetry parameter, a click location, a velocity dependence, and an audio parameter.

26. The method of claim 23, further comprising:

receiving a measurement signal based on the haptic output by the haptic device;

modifying the at least one parametric data set associated with the at least one user command to produce a modified parametric data set based on the measurement signal; and

sending a signal based on the modified parametric data set and being operative to cause the haptic device to output a haptic effect associated with the modified parametric data set.

27. The method of claim 23, further comprising:

receiving data associated with the plurality of operational characteristics of the mechanical device; and

automatically producing, without user intervention, the at least one parametric data set based on the data.

28. The method of claim 23, further comprising:

receiving data associated with the plurality of operational characteristics of the mechanical device; and

automatically producing, without user intervention, the at least one parametric data set based on the data,

the data associated with the plurality of operational characteristics of the mechanical device being at least one of analog data and digital data; and

the at least one parametric data set associated with the mechanical device being digital data.