CLAIMS

1. An apparatus, comprising:

one or more computer readable storage media;

a processing system operatively coupled with the one or more computer readable storage media; and

a user input interface comprising program instructions stored on the one or more computer readable storage media that, based on being read and executed by the processing system, direct the processing system to at least:

identify a target pace for delivery of user input state to an application;

determine, based at least on the target pace, one or more timing parameters for transfer of the user input state from a user input device; and

indicate the one or more timing parameters to the user input device, wherein the user input device responsively transfers the user input state according to the one or more timing parameters.

2. The ~~user input interface~~ apparatus of claim 1, wherein the one or more timing parameters comprise a transfer offset and a transfer interval for adjustment of transfer of successive user input state from the user input device, wherein the transfer offset is based at least in part on a lag between transmission of the user input state by the user input device and receipt of the user input state by the user input interface.

3. The ~~user input interface~~ apparatus of claim 1, comprising further program instructions, based on being executed by the processing system, direct the processing system to at least:

receive an indication of the target pace from the application;

wherein the indication of the target pace comprises an indication of a recurrent event within a host system executing the application and a timing offset from the recurrent event; and

wherein the recurrent event comprises at least one of a display refresh indicator, a display vertical sync indicator, or a graphics frame rate timing characteristic of a graphics process of the host system.

4. The ~~user input interface~~ apparatus of claim 1, comprising further program instructions, based on being executed by the processing system, direct the processing system to at least:

receive a timing indicator transferred by the user input device that corresponds to a time when the user input device transmits the user input state;

determine a lag between transmission of the user input state by the user input device and receipt of the user input state by the user input interface; and

determine, based on the target pace and the lag, the one or more timing parameters.

5. The ~~user input interface~~ apparatus of claim 4, wherein the timing indicator comprises a monotonically changing count generated by the user input device and included in communications comprising the user input state transferred by the user input device.

6. The ~~user input interface~~ apparatus of claim 1, comprising further program instructions, based on being executed by the processing system, direct the processing system to at least:

monitor timing associated with one or more requests from the application for user input state; and

based at least on the timing associated with one or more requests, determine the target pace, wherein the target pace comprises at least a timing offset from a recurrent event within a host system executing the application.

7. The ~~user input interface~~ apparatus of claim 1, wherein the user input device comprises at least one of a gaming controller, keyboard, mouse, touchpad, adaptive controller, virtual reality controller, augmented reality controller, and touchscreen.

8. A method of operating a user input interface on a host system, the method comprising:

identifying a target pace for delivery of user input state to an application;

determining, based at least on the target pace, one or more timing parameters for transfer of the user input state from a user input device; and

indicating the one or more timing parameters to the user input device, wherein the user input device responsively transfers the user input state according to the one or more timing parameters.

9. The method of claim 8, wherein the one or more timing parameters comprise a transfer offset and a transfer interval for adjustment of transfer of successive user input state from the user input device, wherein the transfer offset is based at least in part on a lag between transmission of the user input state by the user input device and receipt of the user input state by the user input interface.

10. The method of claim 8, further comprising:

receiving an indication of the target pace from the application;

wherein the indication of the target pace comprises an indication of a recurrent event within the host system executing the application and a timing offset from the recurrent event; and

wherein the recurrent event comprises at least one of a display refresh indicator, a display vertical sync indicator, or a graphics frame rate timing characteristic of a graphics process of the host system.

11. The method of claim 8, further comprising:

receiving a timing indicator transferred by the user input device that corresponds to a time when the user input device transmits the user input state;

determining a lag between transmission of the user input state by the user input device and receipt of the user input state by the user input interface; and

determining, based on the target pace and the lag, the one or more timing parameters.

12. The method of claim 11, wherein the timing indicator comprises a monotonically changing count generated by the user input device and included in communications comprising the user input state transferred by the user input device.

13. The method of claim 8, further comprising:

monitoring timing associated with one or more requests from the application for user input state; and

based at least on the timing associated with one or more requests, determining the target pace, wherein the target pace corresponds to at least a recurrent event within the host system executing the application and a timing offset from the recurrent event.

14. A user interface system, comprising:

an application interface configured to identify preferred delivery timing of user input state to an application, wherein the preferred delivery timing corresponds to at least a recurrent event within a host system executing the application and a timing offset from the recurrent event;

a timing adjustment system configured to determine, based at least on the preferred delivery timing, one or more timing parameters for transfer of the user input state from a user input device; and

an input interface indicate the one or more timing parameters to the user input device, wherein the user input device responsively transfers the user input state according to the one or more timing parameters.

15. The user interface system of claim 14, the timing adjustment system configured to:

determine a lag between transmission of the user input state by the user input device and receipt of the user input state by the user input system; and

determine, based on the lag and the preferred delivery timing, the one or more timing parameters comprising a transfer offset and a transfer interval for adjustment of transfer of successive user input state from the user input device.