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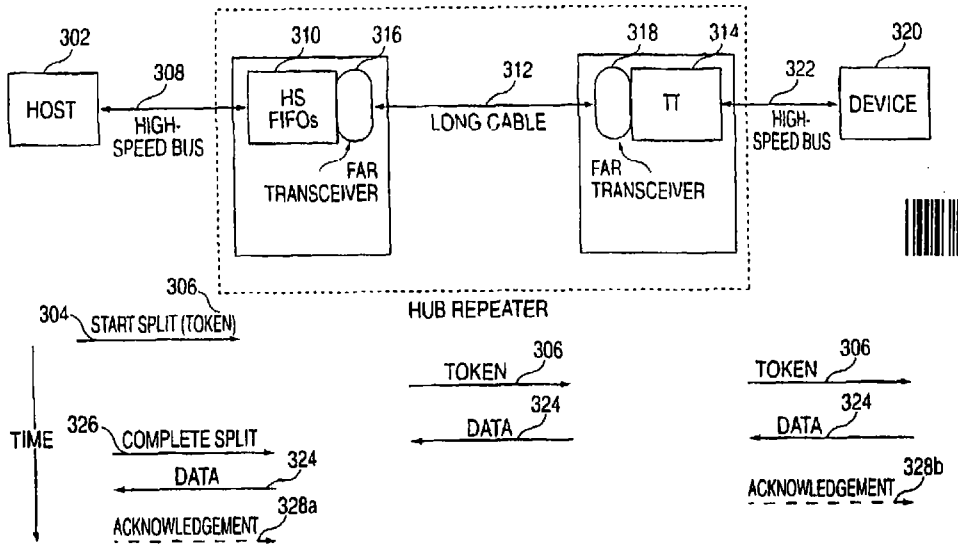
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(54) Title: METHOD AND APPARATUS FOR IMPROVING TIME CONSTRAINTS AND EXTENDING LIMITED LENGTH CABLES IN A MULTIPLE-SPEED BUS



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(57) Abstract: A system and method are disclosed providing for broadened time constraints under USB 2.0 protocol, enabling extended cable spans, in addition to other benefits. The present invention in one embodiment utilizes "split transactions" to take advantage of the relaxed latency requirements of this scheme, in addition to utilizing the 80/20 transaction ratio for USB 2.0 microframes. Another embodiment of the present invention improves timing constrainst by providing a delay between start splits and complete splits equal to some number,"N", of microframes. A further embodiment takes advantage of the fact that under USB 2.0, no transaction can span from one frame to the next, freeing one extra microframe per frame by virtue of phase shifting a slave device into appropriate synchnronization. Lastly, an embodiment of the present invention improves timing constrainst by providing a delay between start splits and complete splits equal to a full frame (eight microframes).

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