

| '632 claim language                                                           | '632 claimed provisional related disclosures: U .S. Prov. 62/327,846 ('846 prov), U.S. Prov. 62/327,907 ('907 prov), & U.S. Prov. 62/327,911 ('911 prov)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <p>[1.0] A network system for providing data beacons, comprising:</p>         | <p>configuration and operation of a data beacon pulser (DBP). A DBP offers fast, efficient, and dependable one-way casting / multi-casting of information globally. A DBP can be utilized for transmission of financial data, ('846 prov, p.1 of 70)</p> <p>The invention achieves the following:</p> <ul style="list-style-type: none"> <li>One way Beacon transfer from source to target as regular, constant flashes / pulses address the limitations of client-server (C-S) or peer-to-peer (P2P) round trip times (RTT). ('846 prov, p.11 of 70)</li> </ul> <p>Beacon Pulser is another technology built upon slingshot (see <i>U.S. Provisional Patent Application No. 62/266,060</i>) and is utilized for the one-way broadcast sending of data. ('907 prov, p.4 of 81)</p> <p>Data Beacon Pulser is a technology which utilizes slingshot to send a constant stream of pulses of information from one region to one or more other regions. Slingshot is a technology which integrates as a network segment within an existing IP pathway of segments and it uses Slingshot as a transport technology over long distances to reliably speed up transfer. ('911 prov, p.32 of 49)</p> |
| <p>[1.1] a first node comprising a first read queue, a first write queue,</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

and a first parallel file system;

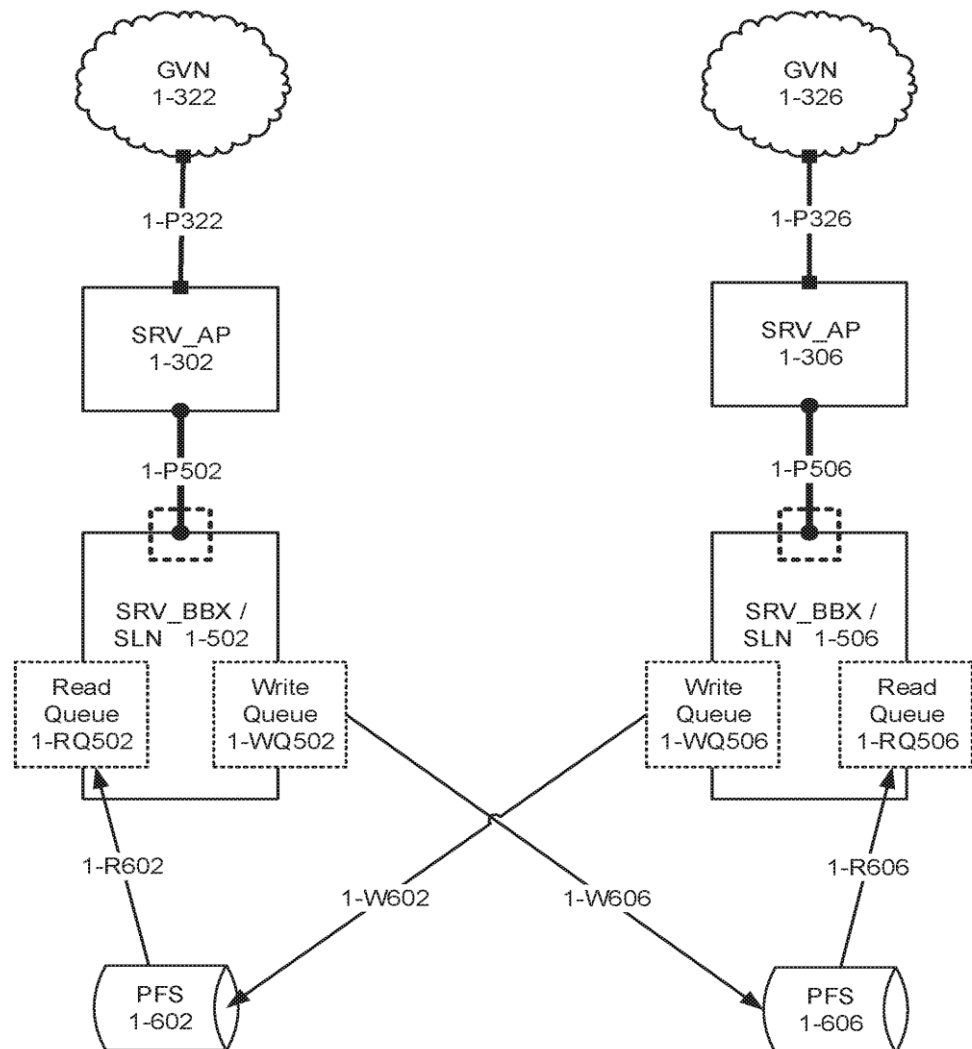


Figure # 1

('907 prov, Fig. 1 at p.41 of 81)

NOTE: A "first node" is associated with backbone exchange server (SRV\_BBX) 1-502, including "first read queue" 1-RQ502, "first write queue" 1-WQ502, and "first parallel file system" (PFS) 1-602.

[1.2]

a second node comprising a second read queue, a second write queue, and a second parallel file system;

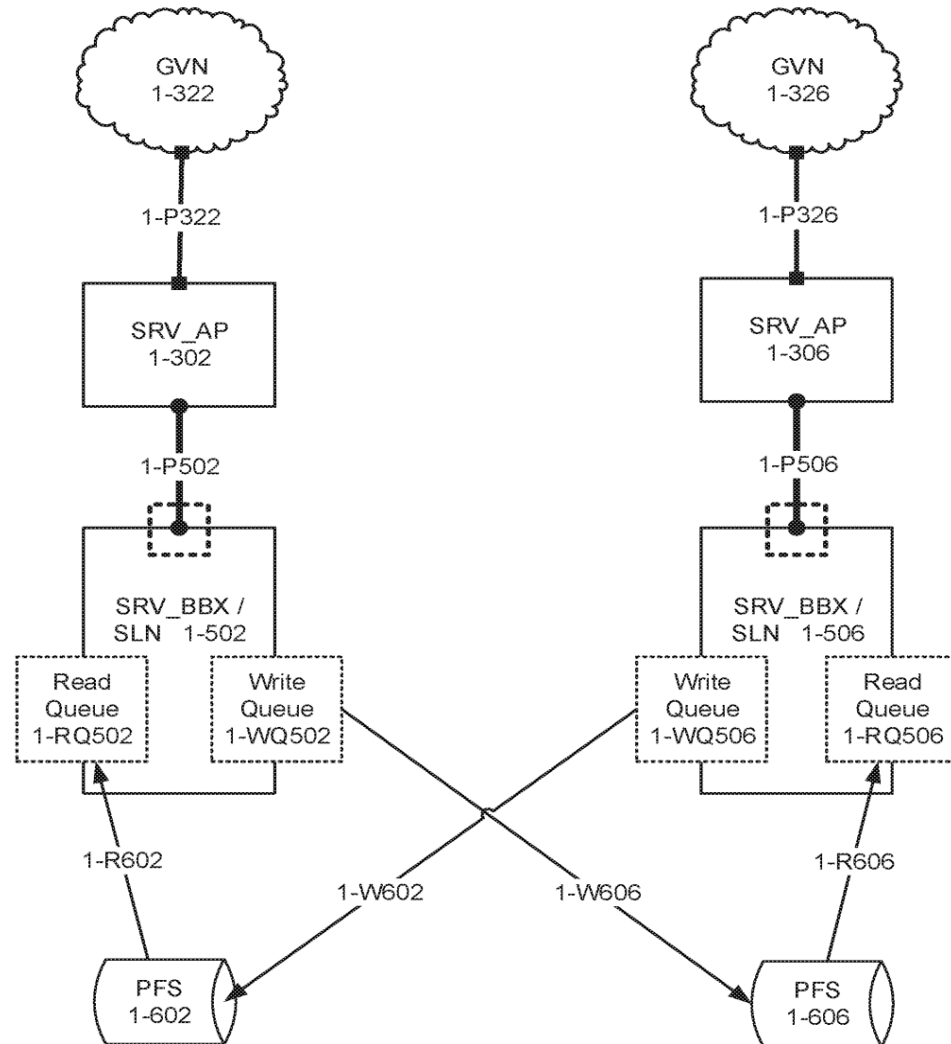


Figure # 1

('907 prov, Fig. 1 at p.41 of 81)

NOTE: A "second node" is associated with backbone exchange server (SRV\_BBX) 1-506, including "second read queue" 1-RQ506, "second write queue" 1-WQ506, and "second parallel file system" (PFS) 1-606.

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| <p>[1.3]<br/>wherein the first node writes first data from the first write queue to the second parallel file system; and</p>                           | <p>Traffic flows from GVN 1-322 to GVN 1-326 following this pathway; to the access point server (SRV_AP) 1-302 via 1-P322 and onto backbone exchange server (SRV_BBX) 1-502. At this point, the slingshot mechanism on SRV_BBX 1-502 via its Write Queue 1-WQ502 function converts the packetized traffic into a combined carrier file and directly writes this carrier file via path 1-W606 to the parallel file system (PFS) storage node 1-606. The Read Queue 1-RQ-506 function of SRV_BBX 1-506 retrieves the carrier file from PFS 1-606 and then it separates the carrier file back into individual packets which are sent to SRV_AP 1-306 via path 1P506 and then onto the GVN 1-326 via 1-P326.</p> <p>('907 prov, p.14 of 81)</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, "first node" associated with backbone exchange server (SRV_BBX) 1-502, writes "first data" (the combined carrier file) from "first write queue" 1-WQ502 to "second parallel file system" (PFS) 1-606 via path 1-W606.</p>                                                        |
| <p>[1.4]<br/>wherein the second node reads the first data from the second parallel file system and places the first data in the second read queue.</p> | <p>Traffic flows from GVN 1-326 to GVN 1-322 following this pathway; to the access point server (SRV_AP) 1-306 via 1-P326 and onto backbone exchange server (SRV_BBX) 1-506. At this point, the slingshot mechanism on SRV_BBX 1-506 via its Write Queue 1-WQ506 function converts the packetized traffic into a combined carrier file and directly writes this file via path 1-W602 to the parallel file system (PFS) storage node 1-602. The Read Queue 1-RQ-502 function of SRV_BBX 1-502 retrieves the carrier file from PFS 1-602 and then it separates the carrier file back into individual packets which are sent to SRV_AP 1-302 via path 1P502 and then on to the GVN 1-322 via 1-P322.</p> <p>('907 prov, p.14 of 81)</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, "second node" associated with backbone exchange server (SRV_BBX) 1-506, can read the "first data" (the combined carrier file) from "second parallel file system" (PFS) 1-606 and place the "first data" (the combined carrier file) in "second read queue" 1-RQ506 via path 1-R606.</p> |

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| <p>[2.0]<br/>The network system of claim 1,</p>                                                                                                       | <p>As depicted and/or discussed above, see FIG. 1 and above cited excerpts and notes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>[2.1]<br/>wherein the second node writes second data from the second write queue to the first parallel file system; and</p>                        | <p>Traffic flows from GVN 1-326 to GVN 1-322 following this pathway; to the access point server (SRV_AP) 1-306 via 1-P326 and onto backbone exchange server (SRV_BBX) 1-506. At this point, the slingshot mechanism on SRV_BBX 1-506 via its Write Queue 1-WQ506 function converts the packetized traffic into a combined carrier file and directly writes this file via path 1-W602 to the parallel file system (PFS) storage node 1-602. The Read Queue 1-RQ-502 function of SRV_BBX 1-502 retrieves the carrier file from PFS 1-602 and then it separates the carrier file back into individual packets which are sent to SRV_AP 1-302 via path 1P502 and then on to the GVN 1-322 via 1-P322.</p> <p>('907 prov, p.14 of 81)</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, "second node" associated with backbone exchange server (SRV_BBX) 1-506, writes "second data" (second combined carrier file) from "second write queue" 1-WQ506 to "first parallel file system" (PFS) 1-602 via path 1-W602.</p> |
| <p>[2.2]<br/>wherein the first node reads the second data from the first parallel file system and places the second data in the first read queue.</p> | <p>As depicted and/or discussed above, see FIG. 1 and above cited excerpts and notes.</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, "first node" associated with backbone exchange server (SRV_BBX) 1-502, reads "second data" (second combined carrier file) from "first parallel file system" (PFS) 1-602 via path 1-R602 into "first read queue" 1-RQ502.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

[3]  
The network system of claim 1, wherein the first data is a carrier file comprising a header, a body, and a footer.

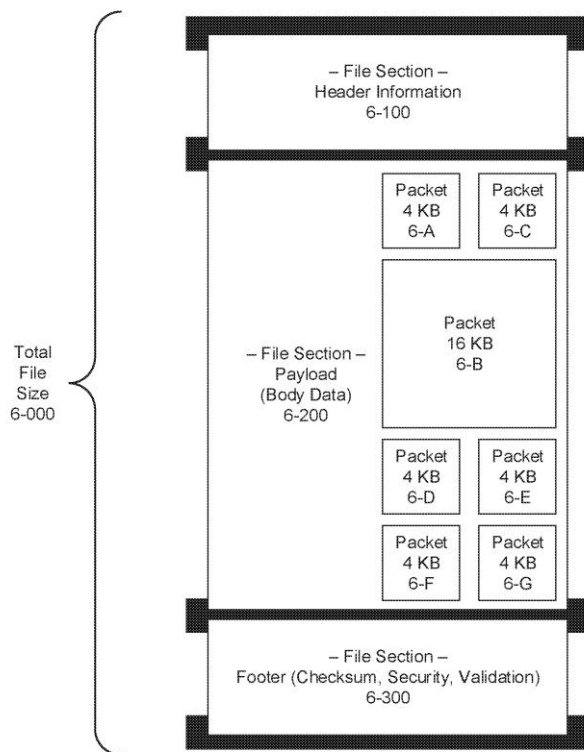


Figure # 6

('846 prov, FIG. 6 at p.46)

**FIGURE # 6 – Slingshop - Composition of file clump of packets**

This figure describes a carrier file sent via slingshot file consisting of a payload of packets in the Body Data 6-200.

This example embodiment describes a carrier file of data organized in three defined sections; Header Information 6-100, Payload 6-200 containing Body Data, and a Footer 6-300.

('846 prov, p.19)

As depicted and/or discussed above, also see FIG. 1 and above cited excerpts and notes.

|                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <p>[4]<br/>The network system of claim 3, wherein the first nodes subsequently writes additional data to the first parallel file system.</p>           | <p>At entry point, the Slinghop captures and buffers received packets into a queue. At variable periods of time cycles governed by Granularity of a Tick, the received packets accumulated in the queue's buffer are combined into the file data section of a bulk, uncompressed carrier file. This combined file is Slingshot to the opposing end of the Slinghop by saving it in a folder on a PFS device where it is read by a sling node (SLN).</p> <p>('907 prov, p.9)</p> <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, "[a]t variable periods of time cycles" the "Slinghop captures and buffers" additional data accumulated data to form a carrier file and saving it in a PFS.</p> |
| <p>[5]<br/>The network system of claim 4, wherein the additional data is written at a set frequency.</p>                                               | <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p> <p>NOTE: As described in the above excerpt and/or depicted above in FIG. 1, the " variable periods of time cycles" are governed by the Granularity of the Tick, or time period between pulses.</p> <p>Also see:</p> <p>Beacon also can have fixed or variable ping rates regulated by a module controlling the Granularity of a Tick. <i>The technology for granularity of a tick is described in U.S. Provisional Patent Application No. 62/296,257.</i></p> <p>The granularity of a tick will determine how frequently to pulse send / transmit the information.</p> <p>('846 prov, p.9)</p>                                                                                                                             |
| <p>[6]<br/>The network system of claim 4, wherein the additional data only contains information that has changed since the first data was written.</p> | <p>Beacon flashes may send the entire batch of information at one time or just the differential of information changed from the last Beacon flash.</p> <p>('846 prov, p.9)</p> <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>[7.0]</p>                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| <p>The network system of claim 1, further comprising a third node comprising a third read queue, a third write queue, and a third parallel file system;</p> | <p><b>FIGURE #1      Two or more Slingshot nodes working in unison form the basis of Slingshop</b></p> <p>This figure demonstrates the operation of two independent slingshot mechanisms (see <i>U.S. Provisional Patent Application No. 62/266,060</i>) juxtaposed with each other and overlaid into an integrated relationship.</p> <p>('907 prov, p.14)</p> <p>NOTE: The title “Two <b>or more</b>” in the title contemplates a third or more nodes for the figure.</p> <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p> |
| <p>[7.1]<br/>wherein the first node writes first data from the first write queue to the second and third parallel file systems at the same time; and</p>    | <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>[7.2]<br/>wherein the third node reads the first data from the third parallel file system and places the first data in the third read queue.</p>         | <p>As depicted and/or discussed above, also see FIG. 1 of '907 prov and above cited excerpts and notes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |