

TIME OPTIMIZED COMMUNICATIONS

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A time optimized communications method for sending electronic messages securely, comprising: breaking a whole electronic alphanumeric character based message into alphanumeric character based message parts; attaching a delivery deadline to ~~for~~ each alphanumeric character based message part; sending the respective alphanumeric character based message parts through a network, out of order from an original order of the whole electronic message; sending the respective alphanumeric character based message parts through the network at random times and before respective delivery deadlines; determining by a processor in the network, the delivery deadline for each alphanumeric character based message part; and delivering each respective alphanumeric character based message part to a recipient by the delivery deadline for each message part.

2. -3. (Cancelled)

4. (Currently Amended) The method of claim 1 [[2]], further comprising sending each respective message part separately and randomly timed to be sent between a minimum time, and a

maximum time range of possible send times, so that all message parts arrive at the recipient by the delivery deadline.

5. – 6. (Cancelled)

7. (Currently Amended) The method of claim 1, further comprising breaking the whole alphanumeric character based electronic message into random sized alphanumeric character based message parts before attaching the delivery time to each alphanumeric character based message part.

8. (Currently Amended) The method of claim 1, further comprising:

determining by the processor, in a plurality of the alphanumeric character based message parts, time constraints for performing actions in each of the plurality of alphanumeric character based message parts, wherein each time constraint instructs the recipient of a time by which they must complete a task according to the whole electronic alphanumeric character based message; and

determining delivery of each of the plurality of alphanumeric character based message parts based on the time constraints.

9. (Currently Amended) The method of claim 1, further comprising sending the respective alphanumeric character based message parts through random network paths to one or more

temporary network repositories before delivering each respective alphanumeric character based message part to the recipient.

10. (Currently Amended) The method of claim 9, further comprising delivering the respective alphanumeric character based message parts to the recipient through random network paths.

11. (Currently Amended) The method of claim 1, further comprising:

determining a priority level for each respective alphanumeric character based message part;

determining a bandwidth consumption at different times of a day for a bandwidth cycle associated with the network; and sending the respective alphanumeric character based message parts through the network based on the priority level of respective alphanumeric character based message parts and balancing out the bandwidth consumption throughout the day.

12. (Currently Amended) The method of claim 11, further comprising time adjusting the sending of respective alphanumeric character based message parts distributing less urgent message parts into less used parts of the bandwidth cycle, and provide smoother flowing communications traffic over the network.

13. (Currently Amended) The method of claim 11, further comprising:

sending the respective alphanumeric character based message parts at random times through the network; and determining the random times for each respective alphanumeric character based message part based on reducing a peak load on available bandwidth consumption for the bandwidth cycle.

14. (Currently Amended) The method of claim 1, wherein the longer a range of time between a send from time and a must deliver by deadline, specified for a data block or part of a one of the alphanumeric character based messages, a transmission timing of message parts or data blocks is shifted into a lowest possible part of a bandwidth load curve and which load curve is mitigated to lower overall peak values.
15. (Currently Amended) The method of claim 1, wherein the shorter a period of time from a present time to a maximum deliver by time specified for a data block or part of the whole electronic message, the closer a send timing is shifted toward an instantaneous send time.
16. (Currently Amended) The method of claim 1, further comprising attaching a priority parameter to respective alphanumeric character based message parts to resolve conflicts arising from timing collisions between orders.
17. (Currently Amended) The method of claim 1, further comprising randomly storing the respective alphanumeric character based message parts among temporary repositories within the network.

18. (Currently Amended) The method of claim 17, further comprising recording a sequence and locations of data blocks that comprise each respective alphanumeric character based message part into an array of pointers to the temporary repositories.

19. (Currently Amended) The method of claim 18, further comprising:

delivering the array of pointers to the temporary repositories to the recipient;
interrogating the temporary repositories for the sequence and locations of data blocks; and
reassembling the data blocks of the respective alphanumeric character based message parts.

20. (Currently Amended) The method of claim 1, further comprising:

breaking one or more of the respective alphanumeric character based message parts into data blocks; maintaining the delivery deadline of each respective alphanumeric character based message with each data block; delivering the data blocks to the recipient based on the delivery deadline.

21. (Currently Amended) The method of claim 20, further comprising: sending the data blocks for [[a]] respective alphanumeric character based messages to separate random temporary repositories in the network; and wherein the step of delivering the data blocks to the recipient includes reassembling the data blocks into their respective alphanumeric character based message parts.