

RDP BITMAP HASH ACCELERATION USING SIMD INSTRUCTIONS

ABSTRACT

Systems, methods and computer readable media are disclosed for a vectorized tile
5 differencing algorithm for a remote desktop protocol (RDP). A server executes a CBC-
variant vectorized hash algorithm that is used to produce a big key that identifies the tile,
and keeps track of these big keys. Where a serial version of the algorithm operates on a
single portion of the image at once – such as 32 bits – the vectorized algorithm operates on
a plurality of these portions simultaneously. Where the server identifies that a tile has
10 already been sent to a client via RDP because it has a second big key that matches the big
key, it sends the big key to the client – which caches received tiles – and the client uses it
to access the proper tile for display. Where the server identifies that a tile has not already
been sent to the client, it sends the client the tile.

15 Fig. 3