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(54) **LOSSLESS DATA FORWARDING IN TELECOMMUNICATION SYSTEMS**

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(57) **ABSTRACT**

A method, apparatus, and a computer-readable storage medium are provided for forwarding of buffered user data at a target node to a re-establishment node. In an example implementation, the method may include receiving, by a first network node, a handover cancel or an Xn-User plane address indication message from a second network node, the handover cancel or the Xn-User plane address indication message including tunnel addresses for one or more data radio bearers; and forwarding, by the first network node, buffered downlink packets to a third network node or the second network node, the forwarding based at least on the tunnel addresses. In an additional example implementation, the method may include sending, by a third network node, tunnel addresses for one or more data radio bearers to a second network node upon re-establishing of a radio resource control connection; and receiving, by the third network node, buffered packets at the first network node from a second network node or the first network node. In an additional example implementation, the method may include initiating, by a user equipment, a radio resource control re-establishment procedure with a third network node, the re-establishment procedure is initiated upon a handover failure of the user equipment from a second network node to a first network node; and receiving, by user equipment, buffered packets at the first node from a third network node.

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Receive, by a first network node, a handover cancel or an Xn-User plane address indication message from a second network node, the handover cancel or the Xn-User plane address indication message including tunnel addresses for one or more data radio bearers

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Forward, by the first network node, buffered downlink packets to a third network node or the second network node, the forwarding based at least on the tunnel addresses

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