~~CLAIMS~~

~~**What is claimed is:**~~

CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising:

receiving, from a base station, a transmission including a transport block (TB);

attempting to decode the transmission;

transmitting a feedback message to the base station indicating that at least a portion of the transmission including the TB was unsuccessfully decoded;

receiving, from the base station, one or more subsequent transmissions ~~of~~including at least a retransmission of the TB;

determining an effective UE throughput ~~of the~~ as:

$$2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot x_i F_i \,,$$

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where μ relates to a sub-carrier spacing (SCS) for the one or more subsequent transmissions ~~of at least the TB based at least in~~ for an active bandwidth part ~~on scaling an initial UE throughput based on a function which is dependent at least upon~~ , μ' corresponds to an SCS of a ~~duration~~bandwidth part across all configured bandwidth parts of a carrier that has a largest configured number of physical resource blocks, S is a set of TBs scheduled partially or fully in a fourteen consecutive symbol duration, C_i' is a number of scheduled codeblocks for an i^{th} TB, L_i is a physical downlink shared channel (PDSCH) duration for the i^{th} TB ~~and~~, x_i is a number of orthogonal frequency division multiplexing (OFDM) symbols ~~of~~used for transmission of the i^{th} TB, F_i is a maximum value of a $\min(k_{0,i}^j + E_i^j, N_{cb,i})$, where $k_{0,i}^j$ is a starting location of a redundancy value for a j^{th} transmission, E_i^j is a $\min(E_r)$ of scheduled code blocks for the ~~one or more subsequent transmissions of at least~~j^{th} transmission, $N_{cb,i}$ is a circular buffer length, where j ranges from 0 to $J-1$, which is a current transmission for the ~~TB~~i^{th} TB, and $\left\lfloor \frac{C_i'}{L_i} \right\rfloor$ is a floor function for the input of $\frac{C_i'}{L_i}$,

wherein the effective UE throughput is evaluated ending at a last symbol of a latest occurring PDSCH transmission; and

processing a subsequent transmission of the one or more subsequent

transmissions based at least in part on whether the effective UE throughput ~~of the one or more subsequent transmissions~~ exceeds a predetermined decoding throughput threshold.

2. The method of claim 1, wherein processing the subsequent transmission of the one or more subsequent transmissions comprises:

decoding the subsequent transmission based on the effective UE throughput of the one or more subsequent transmissions being less than the predetermined decoding throughput threshold.

3. The method of claim 1, wherein processing the subsequent transmission of the one or more subsequent transmissions comprises:

refraining from decoding the subsequent transmission based on the effective UE throughput of the one or more subsequent transmissions exceeding the predetermined decoding throughput threshold.

4. The method of claim 1, wherein processing the subsequent transmission of the one or more subsequent transmissions comprises:

refraining from decoding any of the one or more subsequent transmissions based on the effective UE throughput of the one or more subsequent transmissions exceeding the predetermined decoding throughput threshold.

5. The method of claim 1, wherein processing the subsequent transmission of the one or more subsequent transmissions comprises:

refraining from decoding ~~the~~at least one TB of the ~~one or more~~ subsequent ~~transmissions~~transmission based on the effective UE throughput ~~of the one or more subsequent transmissions~~ exceeding the predetermined decoding throughput threshold.

~~6. The method of claim 1, wherein the effective UE throughput of the subsequent transmission is evaluated for an interval ending at an end of a last symbol of a latest PDSCH transmission.~~

~~7~~6. The method of claim 1, wherein the predetermined decoding throughput threshold (TP_{max}) is defined as:

$$TP_{max} = \frac{1}{R_{LBRM}} TBS_{LBRM},$$

where TBS_{LBRM} is a maximum TB size with limited buffer rate matching (LBRM) enabled, and where R_{LBRM} is a coding rate when transmitting a TB of the maximum TB size with LBRM enabled.

~~8. The method of claim 7, wherein the effective UE throughput of the subsequent transmission is defined as:~~

$$2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot x_i F_i$$

~~where μ relates to a sub-carrier spacing (SCS) for the one or more subsequent transmissions for an active bandwidth part, μ' corresponds to an SCS of a bandwidth part across all configured bandwidth parts of a carrier that has a largest configured number of physical resource blocks, C_i' is a number of scheduled codeblocks for an i^{th} TB, L_i is a physical downlink shared channel (PDSCH) duration for the i^{th} TB, S is a set of TBs scheduled partially or fully in a consecutive-symbol duration for the i^{th} TB, x_i is a number of orthogonal frequency division multiplexing (OFDM) symbols of the one or more subsequent transmissions of the i^{th} TB, F_i is a number of coded bits in a codeblock and is a maximum value of a $\min(k_{0,i}^j + E_i^j, N_{cb,i})$, where $k_{0,i}^j$ is a starting location of a redundancy value for a j^{th} transmission, E_i^j is a $\min(E_x)$ of scheduled code blocks for the j^{th} transmission, $N_{cb,i}$ is a circular buffer length, where j ranges from 0 to $J-1$, which is a current subsequent transmission for the i^{th} TB, $\left\lfloor \frac{C_i'}{L_i} \right\rfloor$ is a floor function for the input of $\frac{C_i'}{L_i}$, and $2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot F_i$ represents the initial UE throughput.~~

~~9~~7. The method of claim 1, wherein the subsequent transmission of the one or more subsequent transmissions is a last-received subsequent transmission.

~~10~~8. The method of claim 1, wherein the predetermined decoding throughput threshold is based at least in part on a throughput for decoding a TB of a maximum TB size transmitted in a fourteen-symbol duration.

~~11~~9. The method of claim 1, wherein the predetermined decoding throughput threshold is based at least in part on a maximum TB size, a number of codeblocks for transmitting a TB of the maximum TB size, a length of a codeblock-level cyclic redundancy check (CRC), a length of a transport-level CRC, a coding rate for transmitting a TB of the maximum TB size with limited-buffer rate-matching (LBRM) enabled, and a scaling factor.

~~12~~10. The method of claim ~~11~~9, wherein the scaling factor is one.

~~13~~11. The method of claim ~~11~~9, wherein the scaling factor is greater than one.

~~14~~12. The method of claim 1, wherein the effective UE throughput ~~of the one or more subsequent transmissions is based at least in part on a number of transmitted codeblocks in the TB, a circular buffer size, and a physical downlink shared channel (PDSCH) duration for the one or more subsequent transmissions.~~

~~15. The method of claim 14, wherein the effective UE throughput of the subsequent transmission~~ is applicable for a subsequent transmission whose PDSCH duration is greater than a mini-slot duration but is not applicable for subsequent transmissions involving different sub-carrier spacing values or back-to-back subsequent transmissions whose PDSCH durations are of a mini-slot.

~~16~~13. The method of claim ~~14~~1, wherein the effective UE throughput ~~of the one or more subsequent transmissions~~ is further based on a sub-carrier spacing of the one or more subsequent ~~transmission~~transmissions and a minimum sub-carrier spacing of a component carrier carrying the one or more subsequent transmissions.

~~17~~14. The method of claim ~~16~~13, wherein the effective UE throughput ~~of the subsequent transmission~~ is applicable for a subsequent transmission whose PDSCH duration is greater than a mini-slot duration and is applicable for a subsequent transmission involving different sub-carrier spacing values than the transmission including the TB.

~~18~~15. The method of claim ~~16~~13, wherein the effective UE throughput ~~of the one or more subsequent transmissions is further based on a sum of UE throughputs for multiple TBs in the one or more subsequent transmissions.~~

~~19. The method of claim 18, wherein the effective UE throughput of the one or more subsequent transmissions~~ is applicable for subsequent transmissions that are not using a redundancy version zero, the redundancy version zero indicating the subsequent transmissions begin at a bit zero of an encoded information message.

~~20~~16. The method of claim ~~18~~13, wherein the effective UE throughput ~~of the one or more subsequent transmissions~~ is applicable regardless of a redundancy version used by the one or more subsequent transmissions, the redundancy version indicating a location in an encoded information message where the one or more subsequent transmissions begin.

~~21~~17. The method of claim 1, wherein processing the subsequent transmission of the one or more subsequent transmissions comprises:

determining whether the UE is required to decode the subsequent transmission

of the one or more subsequent transmissions.

~~22~~18. The method of claim ~~21~~17, wherein determining whether the UE is required to decode the subsequent transmission of the one or more subsequent transmissions is based at least in part on whether the effective UE throughput ~~of at least the one or more subsequent transmissions~~ exceeds the predetermined decoding throughput threshold.

19. An apparatus for wireless communication at a user equipment (UE), comprising:

a processor,

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

receive, from a base station, a transmission including a transport block (TB);

attempt to decode the transmission;

transmit a feedback message to the base station indicating that at least a portion of the transmission including the TB was unsuccessfully decoded;

receive, from the base station, one or more subsequent transmissions including at least a retransmission of the TB;

determine an effective UE throughput throughput as:

$$2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot x_i F_i \,,$$

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where μ relates to a sub-carrier spacing (SCS) for the one or more subsequent transmissions for an active bandwidth part, μ' corresponds to an SCS of a bandwidth part across all configured bandwidth parts of a carrier that has a largest configured number of physical resource blocks, S is a set of TBs scheduled partially or fully in a fourteen consecutive symbol duration, C_i' is a number of scheduled codeblocks for an i^{th} TB, L_i is a physical downlink shared channel (PDSCH) duration for the i^{th} TB, x_i is a number of orthogonal frequency division multiplexing (OFDM) symbols used for transmission of the i^{th} TB, F_i is a maximum value of a $\min(k_{0,i}^{j} + E_i^{j}, N_{cb,i})$, where $k_{0,i}^{j}$ is a starting location of a redundancy value for a j^{th} transmission, E_i^{j} is a $\min(E_r)$ of scheduled code blocks for the j^{th} transmission, $N_{cb,i}$ is a circular buffer length, where j ranges from 0 to $J-1$, which is a current transmission for the

i^{th} TB, and $\left\lfloor \frac{C_i'}{L_i} \right\rfloor$ is a floor function for the input of $\frac{C_i'}{L_i}$,

wherein the effective UE throughput is evaluated ending at a last symbol of the latest occurring PDSCH transmission; and

process a subsequent transmission of the one or more subsequent transmissions based at least in part on whether the effective UE throughput exceeds a predetermined decoding throughput threshold.

20. The apparatus of claim 19, wherein the instructions to process the subsequent transmission of the one or more subsequent transmissions are further executable by the processor to cause the apparatus to:

decode the subsequent transmission based on the effective UE throughput of the one or more subsequent transmissions being less than the predetermined decoding throughput threshold.

21. The apparatus of claim 19, wherein the instructions to process the subsequent transmission of the one or more subsequent transmissions are further executable by the processor to cause the apparatus to:

refrain from decoding any of the one or more subsequent transmissions based on the effective UE throughput of the one or more subsequent transmissions exceeding the predetermined decoding throughput threshold.

22. The apparatus of claim 19, wherein the predetermined decoding throughput threshold (TP_{max}) is defined as:

$$TP_{max} = \frac{1}{R_{LBRM}} TBS_{LBRM},$$

where TBS_{LBRM} is a maximum TB size with limited buffer rate matching (LBRM) enabled, and where R_{LBRM} is a coding rate when transmitting a TB of the maximum TB size with LBRM enabled.

23. An apparatus for wireless communication at a user equipment (UE), comprising:

means for receiving, from a base station, a transmission including a transport block (TB);

means for attempting to decode the transmission;

means for transmitting a feedback message to the base station indicating that at

least a portion of the transmission including the TB was unsuccessfully decoded;

means for receiving, from the base station, one or more subsequent transmissions ~~of~~including at least a retransmission of the TB;

means for determining an effective UE throughput ~~of the~~ as:

$$2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot x_i F_i \,,$$

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where μ relates to a sub-carrier spacing (SCS) for the one or more subsequent transmissions ~~of at least the TB based at least in~~ for an active bandwidth part ~~on scaling an initial UE throughput based on a function which is dependent at least upon~~ , μ' corresponds to an SCS of a ~~duration~~bandwidth part across all configured bandwidth parts of a carrier that has a largest configured number of physical resource blocks, S is a set of TBs scheduled partially or fully in a fourteen consecutive symbol duration, C_i' is a number of scheduled codeblocks for an i^{th} TB, L_i is a physical downlink shared channel (PDSCH) duration for the i^{th} TB ~~and~~, x_i is a number of orthogonal frequency division multiplexing (OFDM) symbols ~~of~~used for transmission of the i^{th} TB, F_i is a maximum value of a $\min(k_{0,i}^{j} + E_i^{j}, N_{cb,i})$, where $k_{0,i}^{j}$ is a starting location of a redundancy value for a j^{th} transmission, E_i^{j} is a $\min(E_r)$ of scheduled code blocks for the ~~one or more subsequent transmissions of at least~~j^{th} transmission, $N_{cb,i}$ is a circular buffer length, where j ranges from 0 to $J-1$, which is a current transmission for the ~~TB~~i^{th} TB, and $\left\lfloor \frac{C_i'}{L_i} \right\rfloor$ is a floor function for the input of $\frac{C_i'}{L_i}$,

wherein the effective UE throughput is evaluated ending at a last symbol of the latest occurring PDSCH transmission; and

means for processing a subsequent transmission of the one or more subsequent transmissions based at least in part on whether the effective UE throughput of the one or more subsequent transmissions exceeds a predetermined decoding throughput threshold.

24. ~~The apparatus of claim 23, wherein the means~~A non-transitory computer-readable medium storing code for ~~processing the subsequent~~ wireless communication at a user equipment (UE), the code comprising instructions executable by a processor to:

receive, from a base station, a transmission ~~of the~~ including a transport block (TB);

attempt to decode the transmission;

transmit a feedback message to the base station indicating that at least a portion of the transmission including the TB was unsuccessfully decoded;

receive, from the base station, one or more subsequent transmissions ~~further comprises:~~including at least a retransmission of the TB;

~~means for decoding the subsequent transmission based on the~~ determine an effective UE throughput ~~of the one or more subsequent transmissions being less than the predetermined decoding throughput threshold.~~

~~25. The apparatus of claim 23, wherein the means for processing the subsequent transmission of the one or more subsequent transmissions further comprises:~~

~~means for refraining from decoding any of the one or more subsequent transmissions based on the effective UE throughput of the one or more subsequent transmissions exceeding the predetermined decoding throughput threshold.~~

~~26. The apparatus of claim 23, wherein the effective UE throughput of the subsequent transmission is evaluated for an interval ending at an end of a last symbol of a latest PDSCH transmission.~~

~~27. The apparatus of claim 23, wherein the predetermined decoding throughput threshold (TP_{max}) is defined as:~~

$$TP_{max} = \frac{1}{R_{LBRM}} TBS_{LBRM},$$

~~where TBS_{LBRM} is a maximum TB size with limited buffer rate matching (LBRM) enabled, and where R_{LBRM} is a coding rate when transmitting a TB of the maximum TB size with LBRM enabled.~~

~~28. The apparatus of claim 27, wherein the effective UE throughput of the subsequent transmission is defined~~ as:

$$2^{\max(0,\mu-\mu')} \cdot \sum_{i \in S} \left\lfloor \frac{C_i'}{L_i} \right\rfloor \cdot x_i F_i ,$$

where μ relates to a sub-carrier spacing (SCS) for the one or more subsequent transmissions for an active bandwidth part, μ' corresponds to an SCS of a bandwidth part across all configured bandwidth parts of a carrier that has a largest configured number of physical resource blocks, S is a set of TBs scheduled partially or fully in a fourteen consecutive symbol

duration, C_i' is a number of scheduled codeblocks for an i^{th} TB, L_i is a physical downlink shared channel (PDSCH) ~~duration for the i^{th} TB, S is a set of TBs scheduled partially or fully in a consecutive symbol~~ duration for the i^{th} TB, x_i is a number of orthogonal frequency division multiplexing (OFDM) symbols ~~of the one or more subsequent transmissions~~used for transmission of the i^{th} TB, F_i ~~is a number of coded bits in a codeblock and~~ is a maximum value of a $\min(k_{0,i}^{j} + E_i^j, N_{cb,i})$, where $k_{0,i}^{j}$ is a starting location of a redundancy value for a j^{th} transmission, E_i^j is a $\min(E_r)$ of scheduled code blocks for the j^{th} transmission, $N_{cb,i}$ is a circular buffer length, where j ranges from 0 to $J-1$, which is a current ~~subsequent~~ transmission for the i^{th} TB, ~~$\left\lfloor \frac{C_t'}{L_t} \right\rfloor$~~and $\left\lfloor \frac{C_i'}{L_i} \right\rfloor$ is a floor function for the input of $\frac{C_i'}{L_i}$, ~~and $2^{\max(0,\mu-\mu^t)} \cdot \sum_{t \in S} \left\lfloor \frac{C_t'}{L_t} \right\rfloor \cdot F_t$ represents the initial UE throughput.~~

~~29. An apparatus for wireless communication at a user equipment (UE), comprising:~~

~~a processor,~~

~~memory coupled with~~wherein the ~~processor; and~~

~~instructions stored in the memory and executable by the processor to cause the apparatus to:~~

~~receive, from a base station, a transmission including a transport block (TB);~~

~~attempt to decode the transmission;~~

~~transmit a feedback message to the base station indicating that at least a portion of the transmission including the TB was unsuccessfully decoded;~~

~~receive, from the base station, one or more subsequent transmissions of at least the TB;~~

~~determine an~~ effective UE throughput ~~of the one or more subsequent transmissions of at least the TB based at least in part on scaling an initial UE throughput based on a function which~~ is ~~dependent at least upon a duration of a physical downlink shared channel for the TB and a number of orthogonal frequency division multiplexing (OFDM) symbols of the one or more subsequent transmissions of at least the TB~~evaluated ending at a last symbol

of the latest occurring PDSCH transmission; and

process a subsequent transmission of the one or more subsequent transmissions based at least in part on whether the effective UE throughput ~~of the one or more subsequent transmissions~~ exceeds a predetermined decoding throughput threshold.

~~30. A non-transitory computer-readable medium storing code for wireless communication at a user equipment (UE),~~25. The method of claim 1, wherein processing the ~~code comprising instructions executable by a processor to:~~

~~receive, from a base station, a~~ subsequent transmission ~~including a transport block (TB);~~

~~attempt to decode the transmission;~~

~~transmit a feedback message to the base station indicating that at least a portion of the transmission including the TB was unsuccessfully decoded;~~

~~receive, from the base station, one or more subsequent transmissions of at least the TB;~~

~~determine an effective UE throughput~~ of the one or more subsequent transmissions ~~of at least the TB based at least in part on scaling an initial UE throughput based on a function which is dependent at least upon a duration of a physical downlink shared channel for the TB and a number of orthogonal frequency division multiplexing (OFDM) symbols of the one or more subsequent transmissions of at least the TB; and~~comprises:

~~process a~~refraining from decoding at least one TB associated with the subsequent transmission, and

sending a NACK for the at least one TB to the base station.

26. The apparatus of claim 19, wherein the instructions to process the subsequent transmission of the one or more subsequent transmissions ~~based at least in part on whether~~are further executable by the processor to cause the apparatus to:

refrain from decoding at least one TB associated with the subsequent transmission, and

send a NACK for the at least one TB to the base station.

27. The apparatus of claim 23, wherein the ~~effective UE throughput~~means

for processing a subsequent transmission of the one or more subsequent transmissions ~~exceeds a predetermined decoding throughput threshold.~~are configured to:

refrain from decoding at least one TB associated with the subsequent transmission, and

send a NACK for the at least one TB to the base station.