

CLAIMS

1. A method for wireless communications by a user equipment (UE), comprising:
 - determining a total amount of allocated resources for transmitting both uplink data and uplink control information (UCI) in a physical uplink shared channel (PUSCH) transmission, wherein the UCI includes a part1 channel state information (CSI) and a part2 CSI;
 - determining a supported payload size for transmitting the part2 CSI based, at least in part, on the total amount of allocated resources and an amount of resources allocated for the uplink data, wherein the supported payload size for transmitting the part2 CSI is determined based on a signaled parameter (α) multiplied by the total amount of allocated resources; and
 - transmitting the uplink data and the UCI in the PUSCH, based on the supported payload size for transmitting the part2 CSI.
2. The method of claim 1, wherein the UCI comprises a type of CSI of a dynamic payload size.
3. The method of claim 1, wherein the supported payload size for transmitting the part2 CSI is determined based on a payload size of the uplink data.
4. The method of claim 1, wherein the amount of resources allocated for the uplink data is conveyed via higher layer signaling, semi-static signaling, or lower layer signaling.
5. The method of claim 1, wherein the supported payload size for transmitting the part2 CSI is determined based on a number of resource blocks (RBs) or resource elements (REs) allocated for the uplink data.
6. The method of claim 5, wherein determining the supported payload size for transmitting the part2 CSI comprises:
 - determining a number of REs or RBs available for transmitting the part2 CSI by subtracting the number of RBs or REs allocated for the uplink data from a number of REs or RBs allocated for the PUSCH; and
 - determining a number of part2 CSI bits that can be transmitted in the PUSCH based on the number of REs or RBs available for transmitting the part2 CSI and a coding rate of the PUSCH.

7. The method of claim 1, wherein the supported payload size for transmitting the part2 CSI is determined by allocating PUSCH resources to the uplink data before allocating PUSCH resources for part2 CSI.
8. The method of claim 1, wherein: the UCI comprises CSI reported according to at least one of a plurality of CSI report settings, wherein each CSI report setting is associated with a respective maximum payload.
9. The method of claim 8, wherein, if multiple CSI reportings are triggered in one PUSCH reporting, then a maximum payload size for transmitting the UCI is determined based on a summation of the respective maximum payload associated with each of the CSI reportings triggered.
10. The method of claim 1, wherein the supported payload size for transmitting the part2 CSI is based at least in part on resource elements assigned to the part1 CSI.
11. The method of claim 1, wherein a part of the UCI is dropped when a size of the UCI is larger than the determined supported payload size.
12. An apparatus for wireless communications by a user equipment (UE), comprising:
 - means for determining a total amount of allocated resources for transmitting both uplink data and uplink control information (UCI) in a physical uplink shared channel (PUSCH) transmission, wherein the UCI includes a part1 channel state information (CSI) and a part2 CSI;
 - means for determining a supported payload size for transmitting the part2 CSI based, at least in part, on the total amount of allocated resources and an amount of resources allocated for the uplink data, wherein the supported payload size for transmitting the part2 CSI is determined based on a signaled parameter (α) multiplied by the total amount of allocated resources; and
 - means for transmitting the uplink data and the UCI in the PUSCH, based on the supported payload size for transmitting the part2 CSI.
13. The apparatus of claim 12, wherein the UCI comprises a type of CSI of a dynamic payload size.

14. The apparatus of claim 12, wherein the supported payload size for transmitting the part2 CSI is determined based on a payload size of the uplink data.
15. The apparatus of claim 12, wherein the amount of resources allocated for the uplink data is conveyed via higher layer signaling, semi-static signaling, or lower layer signaling.
16. The apparatus of claim 12, wherein the supported payload size for transmitting the part2 CSI is determined based on a number of resource blocks (RBs) or resource elements (REs) allocated for the uplink data.
17. The apparatus of claim 16, wherein the means for determining the supported payload size for transmitting the part2 CSI comprises:
 - means for determining a number of REs or RBs available for transmitting the part2 CSI by subtracting the number of RBs or REs allocated for the uplink data from a number of REs or RBs allocated for the PUSCH; and
 - means for determining a number of part2 CSI bits that can be transmitted in the PUSCH based on the number of REs or RBs available for transmitting the part2 CSI and a coding rate of the PUSCH.
18. The apparatus of claim 12, wherein the supported payload size for transmitting the part2 CSI is determined by allocating PUSCH resources to uplink data before allocating PUSCH resources for part2 CSI.
19. The apparatus of claim 12, wherein: the UCI comprises CSI reported according to at least one of a plurality of CSI report settings, wherein each CSI report setting is associated with a respective maximum payload.
20. The apparatus of claim 19, wherein, if multiple CSI reportings are triggered in one PUSCH reporting, then a maximum payload size for transmitting the UCI is determined based on a summation of the respective maximum payload associated with each of the CSI reportings triggered.

21. An apparatus for wireless communications by a user equipment (UE), comprising:
at least one processor configured to:
determine a total amount of allocated resources for transmitting both uplink data and uplink control information (UCI) in a physical uplink shared channel (PUSCH) transmission, wherein the UCI includes a part1 channel state information (CSI) and a part2 CSI, and
determine a supported payload size for transmitting the part2 CSI based, at least in part, on the total amount of allocated resources and an amount of resources allocated for the uplink data, wherein the supported payload size for transmitting the part2 CSI is determined based on a signaled parameter (α) multiplied by the total amount of allocated resources; and
a transmitter configured to transmit uplink data and the UCI in the PUSCH, based on the supported payload size for transmitting the part2 CSI.
22. The apparatus of claim 21, wherein the supported payload size for transmitting the part2 CSI is based at least in part on resource elements assigned to the part1 CSI.
23. A non-transitory computer readable medium having instructions stored thereon for:
determining a total amount of allocated resources for transmitting both uplink data and uplink control information (UCI) in a physical uplink shared channel (PUSCH) transmission, wherein the UCI includes a part1 channel state information (CSI) and a part2 CSI;
determining a supported payload size for transmitting the part2 CSI based, at least in part, on the total amount of allocated resources and an amount of resources allocated for the uplink data, wherein the supported payload size for transmitting the part2 CSI is determined based on a signaled parameter (α) multiplied by the total amount of allocated resources; and
transmitting the uplink data and the UCI in the PUSCH, based on the supported payload size for transmitting the part2 CSI.