Proposal 2.6.6-1:

When a PUCCH carrying HP SR with PF0 overlaps with a PUCCH carrying LP HARQ-ACK with PF0, further study the following options (proponents are encouraged to provide more details and analysis):

* + Opt.1: The positive SR and HARQ-ACK are multiplexed and transmitted on the SR resource.
    - Opt.1a: The UE does not transmit negative SR.
    - Opt.1b: For negative SR, the UE transmit only HARQ-ACK on the HARQ-ACK resource.
    - Opt.1c: For negative SR, the UE transmits SR and HARQ-ACK on the SR resource
    - FFS: whether with power boost to transmit multiplexed payload or not.
  + Opt.2: The SR and HARQ-ACK are multiplexed and transmitted on the HARQ-ACK resource.
    - Opt.2a: If SR is positive, an offset (e.g. 1 PRB) is added to the starting PRB of the HARQ-ACK PUCCH resource.
    - Opt.2b: Using 4 CS values as for SR+1-bit HARQ-ACK in Rel-15/16. For the case of 2-bit HARQ-ACK, the HARQ-ACK is reduced/compressed to 1-bit.
    - Opt.2c: If SR is positive, SR is multiplexed on HARQ-ACK resource in the same way as Rel-15. If SR is negative, transmit only HARQ-ACK on HARQ-ACK resource.
  + Opt.3: No enhancement over Rel-16.
  + Other options not excluded.
  + FFS: Whether/How to differentiate HP SR and LP SR when multiplexed with LP HARQ-ACK?

Proposal 2.6.6-2:

When a PUCCH carrying HP SR with PF0 overlaps with a PUCCH carrying LP HARQ-ACK with PF1, further study the following options (proponents are encouraged to provide more details and analysis):

* + Opt.1: The positive SR and HARQ-ACK are multiplexed and transmitted on the SR resource.
    - Opt.1a: The UE does not transmit negative SR.
    - Opt.1b: For negative SR, the UE transmit only HARQ-ACK on the HARQ-ACK resource.
    - Opt.1c: For negative SR, the UE transmits SR and HARQ-ACK on the SR resource
    - FFS: whether with power boost to transmit multiplexed payload or not.
  + Opt.2: The SR and HARQ-ACK are multiplexed and transmitted on the HARQ-ACK resource.
    - Opt.2a: If SR is positive, an offset (e.g. 1 PRB) is added to the starting PRB of the HARQ-ACK PUCCH resource.
    - Opt.2b: Applying QPSK for SR+1-bit HARQ-ACK. For the case of 2-bit HARQ-ACK, the HARQ-ACK is reduced/compressed to 1-bit.
    - FFS on conditions of multiplexing.
  + Opt.3: For positive SR, transmit HARQ-ACK on the SR resource. For negative SR, transmit HARQ-ACK on the HARQ-ACK resource.
  + Opt.4: For positive SR, transmit SR on the SR resource and drop HARQ-ACK. For negative SR, transmit HARQ-ACK on the HARQ-ACK resource.
  + Opt.5: No enhancement over Rel-16.
  + Other options not excluded.
  + FFS: Whether/How to differentiate HP SR and LP SR when multiplexed with LP HARQ-ACK?

Proposal 2.6.6-3:

When a PUCCH carrying HP SR with PF1 overlaps with a PUCCH carrying LP HARQ-ACK with PF0, further study the following options (proponents are encouraged to provide more details and analysis):

* + Opt.1: The SR and HARQ-ACK are multiplexed and transmitted on the SR resource.
    - Opt.1a: For positive SR, the UE transmits the PUCCH in the resource using PUCCH format 1 for SR. The value of cyclic shift of sequence, i.e., , of this PUCCH format 1 is determined by HARQ-ACK, and the bit, i.e., b(0), of this PUCCH format 1 is determined by SR. For negative SR, the UE transmits only a PUCCH with HARQ-ACK information and drops the PUCCH with negative SR.
    - Opt.1b: SR and HARQ-ACK are multiplexed and modulated to be transmitted on the SR resource
  + Opt.2: The SR and HARQ-ACK are multiplexed and transmitted on the HARQ-ACK resource.
    - Opt.2a: If SR is positive, an offset (e.g. 1 PRB) is added to the starting PRB of the HARQ-ACK PUCCH resource.
    - Opt.2b: Using 4 CS values as for SR+1-bit HARQ-ACK in Rel-15/16. For the case of 2-bit HARQ-ACK, the HARQ-ACK is reduced/compressed to 1-bit.
    - Opt.2c: If SR is positive, SR is multiplexed on HARQ-ACK resource in the same way as Rel-15. If SR is negative, transmit only HARQ-ACK on HARQ-ACK resource.
    - Opt.2d: HP SR and LP HARQ-ACK are multiplexed by the Rel-15 cyclic shift only if latency requirement for HP SR is met. Otherwise, drop the LP HARQ-ACK and only transmit the HP SR on its resource.
  + Opt.3: For positive SR, transmit HARQ-ACK on the SR resource. For negative SR, transmit HARQ-ACK on the HARQ-ACK resource.
  + Opt.4: No enhancement over Rel-16.
  + Other options not excluded.
  + FFS: Whether/How to differentiate HP SR and LP SR when multiplexed with LP HARQ-ACK?