Topic 4: Interconnection technology from R&D to production

Statement: ‘Good old soldering ribbons is there to stay. Just add a busbar every two years and cut your cells.’

Counter-statement: ‘The multiwire revolution has started in manufacturing and will take over the PV world. No other approach comes near in terms of Ag reduction and long term reliability.’

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Discussion:
- To follow the ITRPV roadmap on Reduction of Ag-Consumption, more than 4BB/5BB are needed
- On the other hand, the eta-gain of every further BB becomes smaller
- Cool products on the market / announced:
  - LG NeON2 Cello with 12 BB
  - Q.Peak Duo with half cell, 6BB round wire -> +15W
  - (SWCT in production, however less prominent producer)

- Issues to be solved:
  - Throughput of stringers
  - Reliability
  - MB: PET foil (will be replaced), cost of wire

- Can become main stream for new production lines, however no retrofit of old lines
  -> rather growth than revolution

Example for other!
Possible to solve,
> 15 companies in R&D
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Shingling:
- In a certain way the opposite of more BB, as finger length is increased
- However, paste saving by reduction of BB width
- More complex, Reliability, Bankability
-> needs more time, only nice for the next years
-> Shingling of Multi-BB-half-cells? High packing density & lowest Rs at lowest Ag cons.

Viewing into the glass ball:

In 2 years: Business as usual vs. Multi-BB in majority of new lines – (opinion) 50% / 50%
In 5 years: B. as u. vs. Multi-BB vs. Shingling vs. New: (opinion) 0% / 50 % / 40% / 10%

-> The future will have more BBs