Bus Splitting

Minutes of project meetings

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| **Organization** | Skoltech |
| **Involved** | Janusz Bialek, David Pozo, Basel Morsy, Anton Hinneck |
| *Completed tasks are crossed out.* | |

# 1st Meeting

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| Date | April 6th, 2020 |
| Attendees | Janusz Bialek, David Pozo, Basel Morsy, Anton Hinneck |
| * Presentation of current status * Next steps   + ~~Selection of a small (~9 bus test case)~~   + ~~Model formulation~~   + ~~Development and implementation of methods~~   + ~~First results~~ | |

# 2nd Meeting

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| Date | April 19th, 2020 |
| Attendees | Janusz Bialek, David Pozo, Basel Morsy, Anton Hinneck |
| * Presentation of current status (next steps of previous meeting) * Remarks on results   + Remove voltage laws on virtual buses, which belong to one original bus   + After splitting, phase-angles can be large between the new buses > can make it impossible to merge them again > small phase angle differences can be enforced by a constraint   + Optimal solutions show radial structure > raises security concerns     - Radial structures present in real-world grid (only an issue, if many buses are split)     - Only splitting several of many buses might decrease costs, while providing sufficient security * Next steps   + Update latex document   + Derive a unified formulation (including Y-matrix)   + Adjust model     - Remove voltage law on virtual buses     - Security constraints     - Enforce small phase angle differences between split buses | |