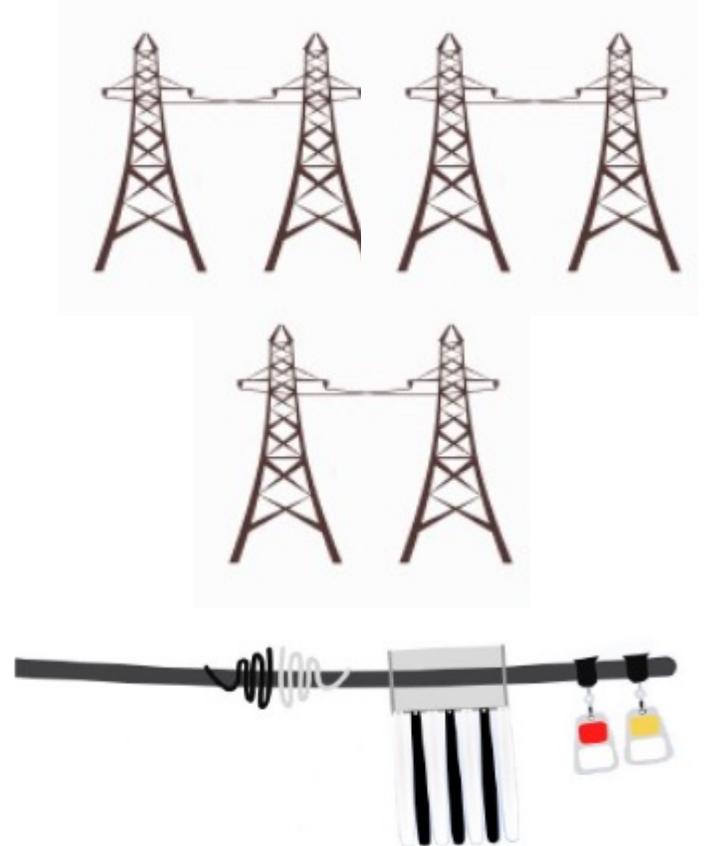


# AMPRION BIRD FLIGHT DIVERTERS

HAARHOFF, LARS  
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# NATURE CONSERVATION IN GERMANY

- Nature conservation and especially Bird protection in selected areas is a requirement for the approval of construction projects in Germany
- Amprion made a research to determine in which high risk areas Bird collision can happen due to existing powerlines
- Solution :
  - Bird flight diverters
- Problem:
  - No European/German standards for technical testing
  - No sufficient an independent testing of effectiveness (collision reduction)
  - Due to this no comprehensive standard of bird flight diverters in Germany



# RIBE-"ZEBRA"-DIVERTERS

- Material:
  - PVC Flappers mounted on stainless-steel wire
  - Alloy clamps with helical rods for installation on the ground wire
- Can be installed on the ground wire by Helicopter
- Moving flappers
- Contrast (Black and White)
- Wear of PVC-Flappers mounted on the stainless-steel wire
- No wear in between the ground wire / clamp
- So far, no harm of the PVC by UV-light

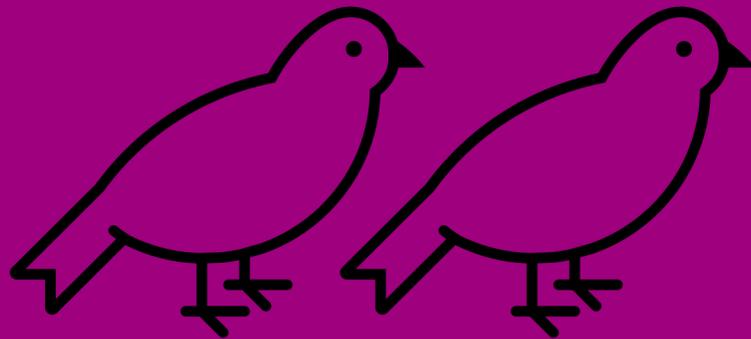
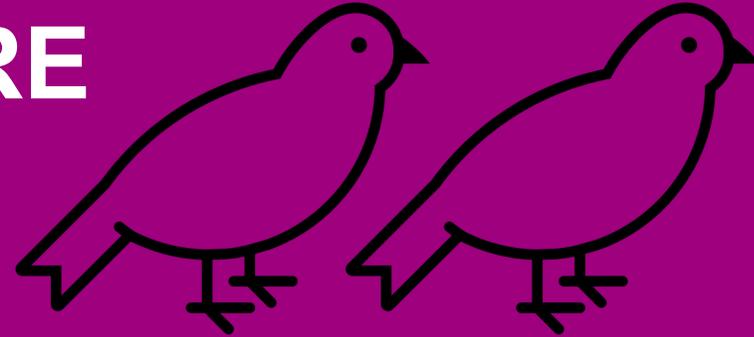


# SMALL SPIRAL FLIGHT DIVERTER

- Material = PVC
- Can be installed on the ground wire during construction or with helicopter
- Do not move
- Contrast (Black and White)
- No wear in between diverter and ground wire
- PVC gets harmed by UV-light



**VIELEN DANK FÜR IHRE  
AUFMERKSAMKEIT!**



**THANK YOU FOR YOUR  
ATTENTION!**