Comparative integrated analysis of the air traffic control of piloted aircrafts and RPVs

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LRPV – the new category

- Drones and RPVs in operation today
- LRPV – Large Remotely Piloted Vehicle – Definition and parameters

“based on cutting-edge developments in aerospace technologies, offering advancements which are opening new and enhanced civil-commercial applications as well as improvements to the safety and efficiency of the entire civil aviation”.

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Benefits of LRPV

- Installation of pilot centers
- Use of pair of pilots
- Executing monotonous, routine tasks (en-route)
- Considering economic benefits (additional cargo space, premium seats)
- Further benefits to be researched
Limitations of LRPV

- Trust issues of automatisation
- Interchange of information, data size, baud rate
- Medium of information exchange, satellite (műhold on figure) coverage
- Infrastructural layout of pilot centres (központ on figure)
Simplified block diagram of Air Traffic Control
Communication channels of piloted aircrafts
Communication channels of integrated mode of operation (piloted and RPV)
Summary, recommendations

1) **A logical interface** should be created between the Air Traffic Controller and the aircraft, so that the controller is able to give instructions (basically to manage conflict situations) to the aircraft via this interface. In case of acceptance, the aircraft autonomously executes the instruction without pilot interaction but with maximum guaranteed safety.

2) **A standardized and direct communication channel** should be initiated between pilot centers and Air Traffic Controllers with **redundancy** being the main purpose.
Thank you for your attention!

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