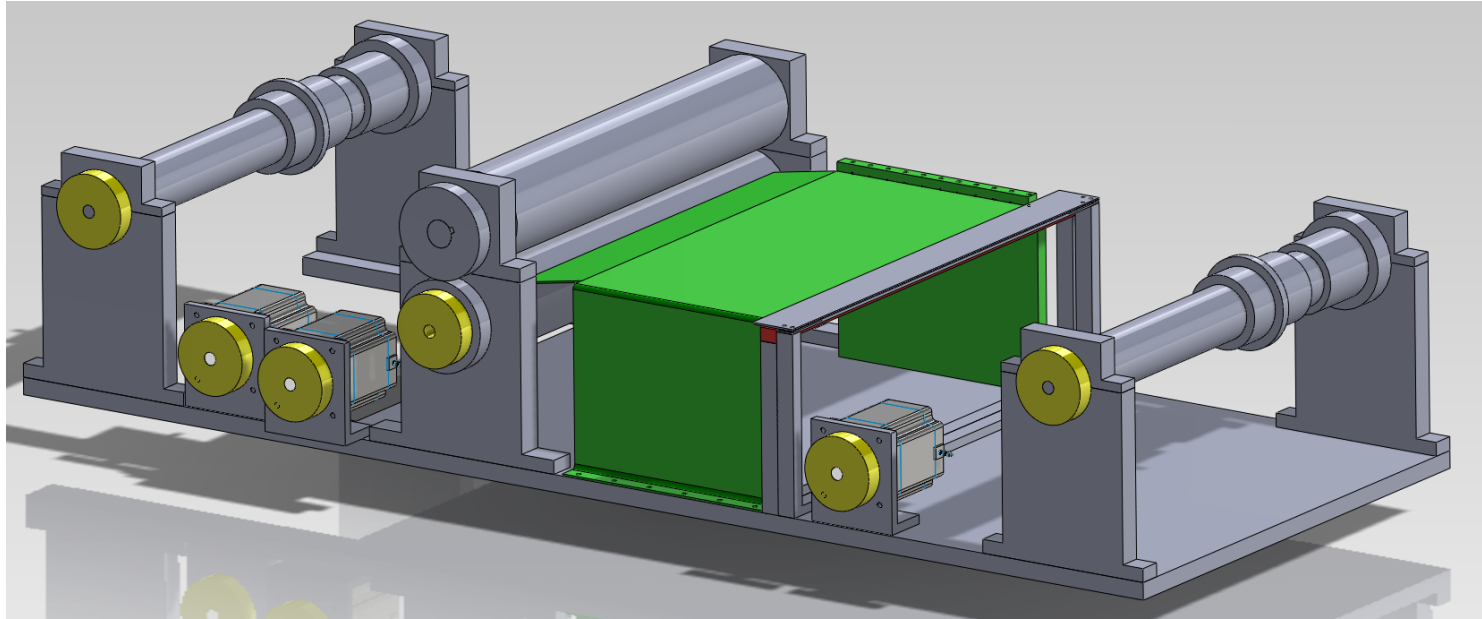


Piano roll scanner



Group 4

Matthias Bönhof, Simon Durrer, Tim Müller, Isabel Züger

Content

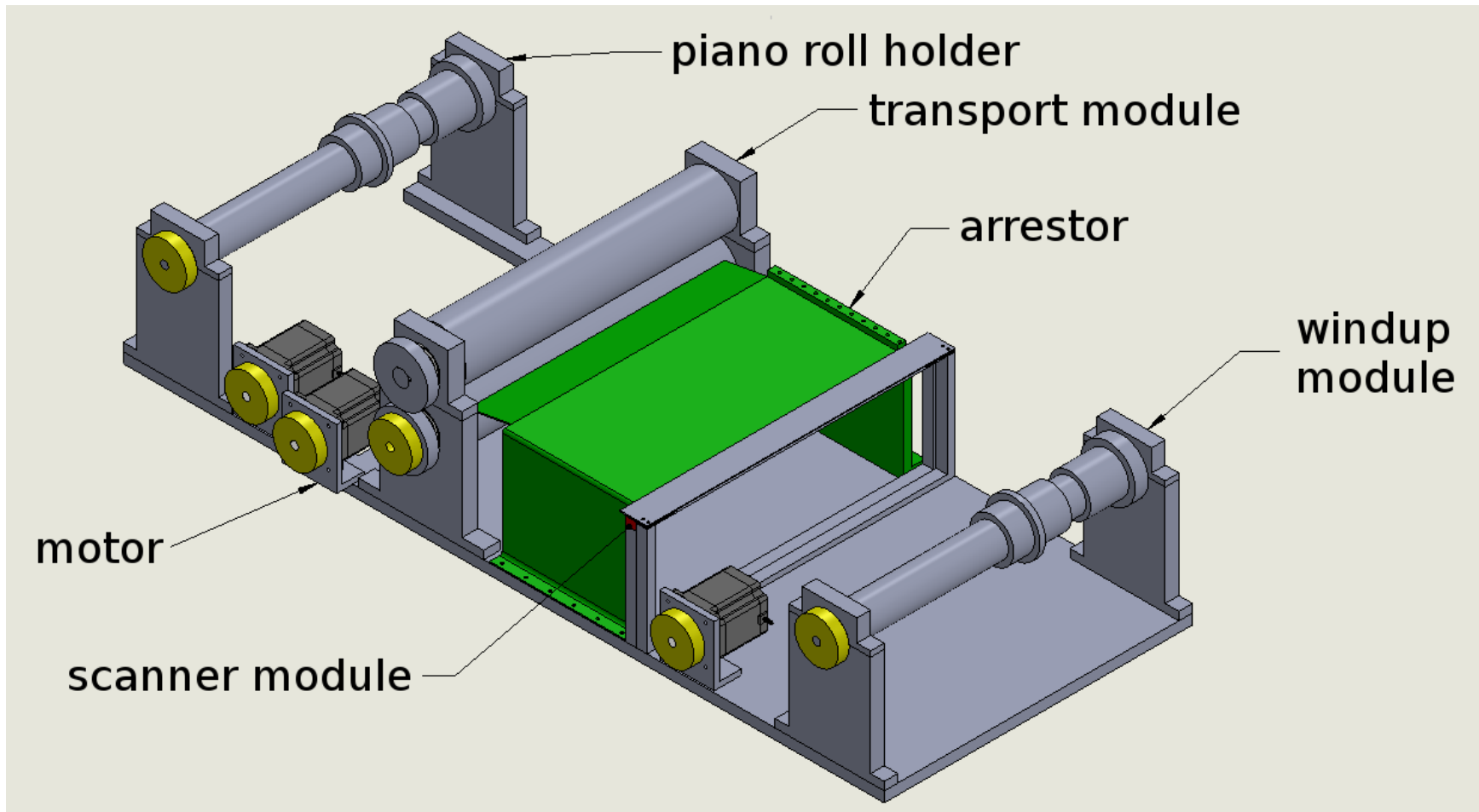


- Problem description
- Piano roll scanner
- Scanner module
- Data processing
- Conclusion
- Further works
- Questions

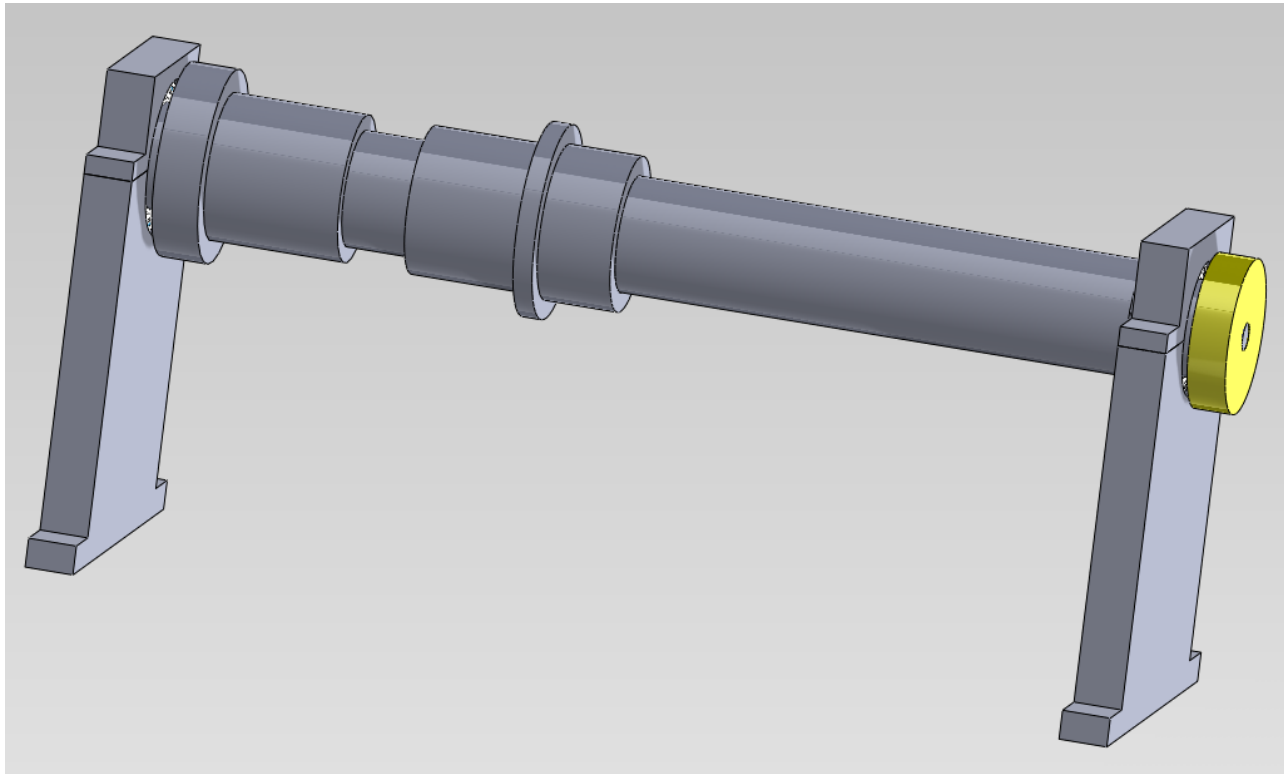
Problem description



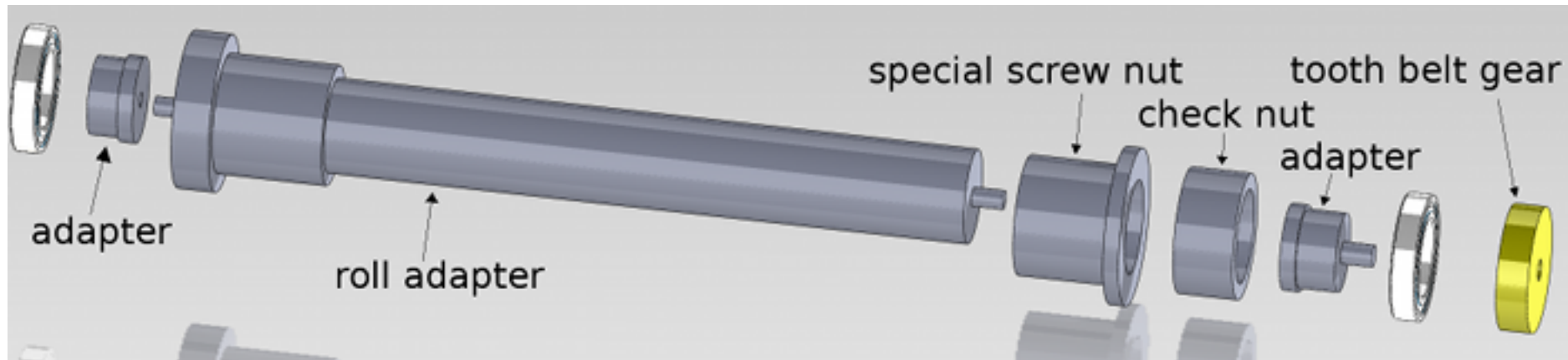
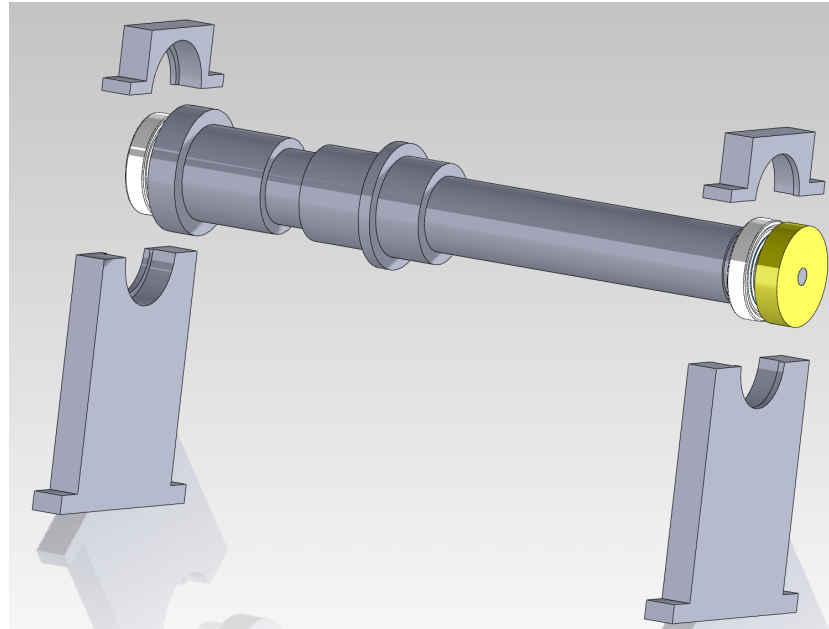
Piano roll scanner



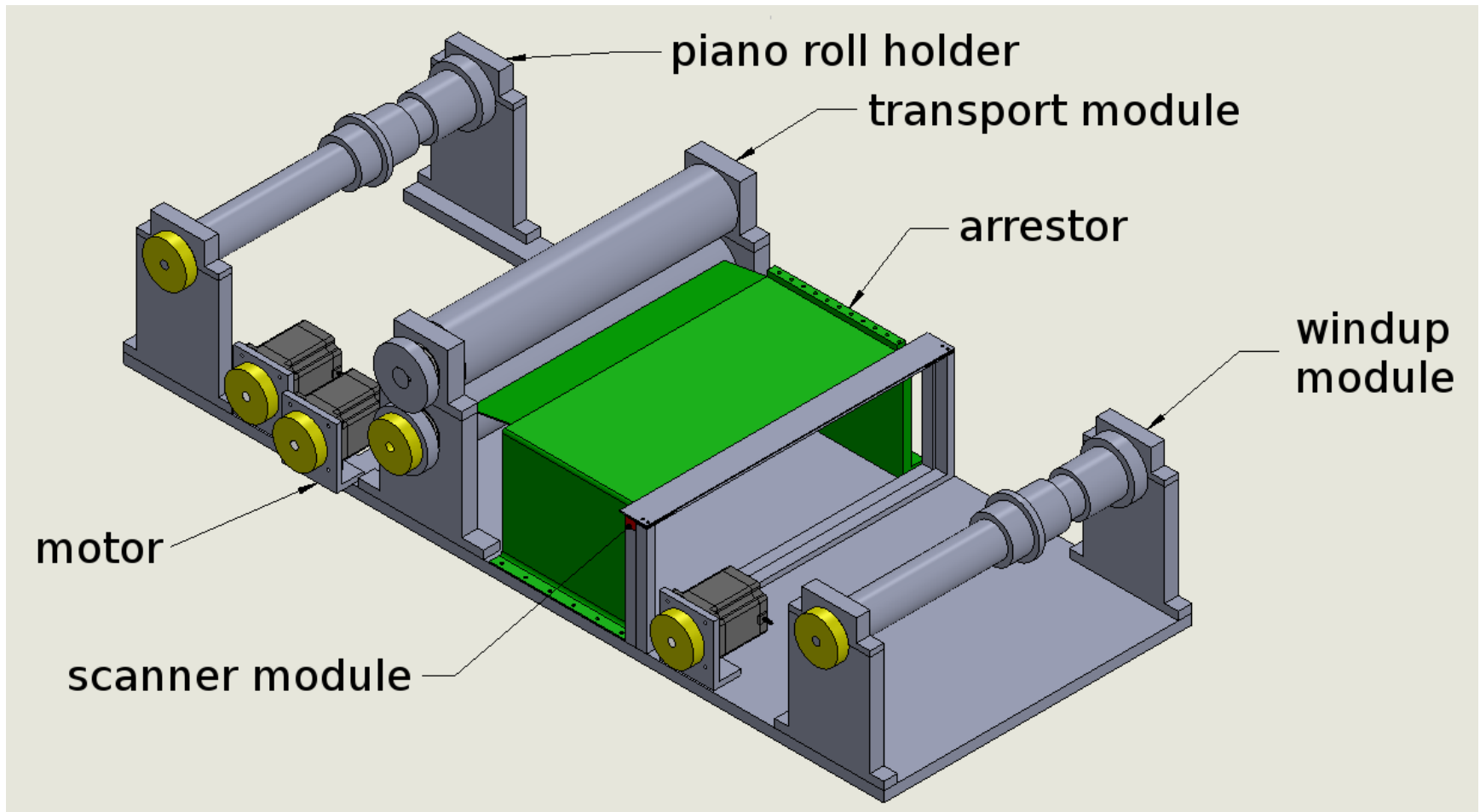
Piano roll scanner



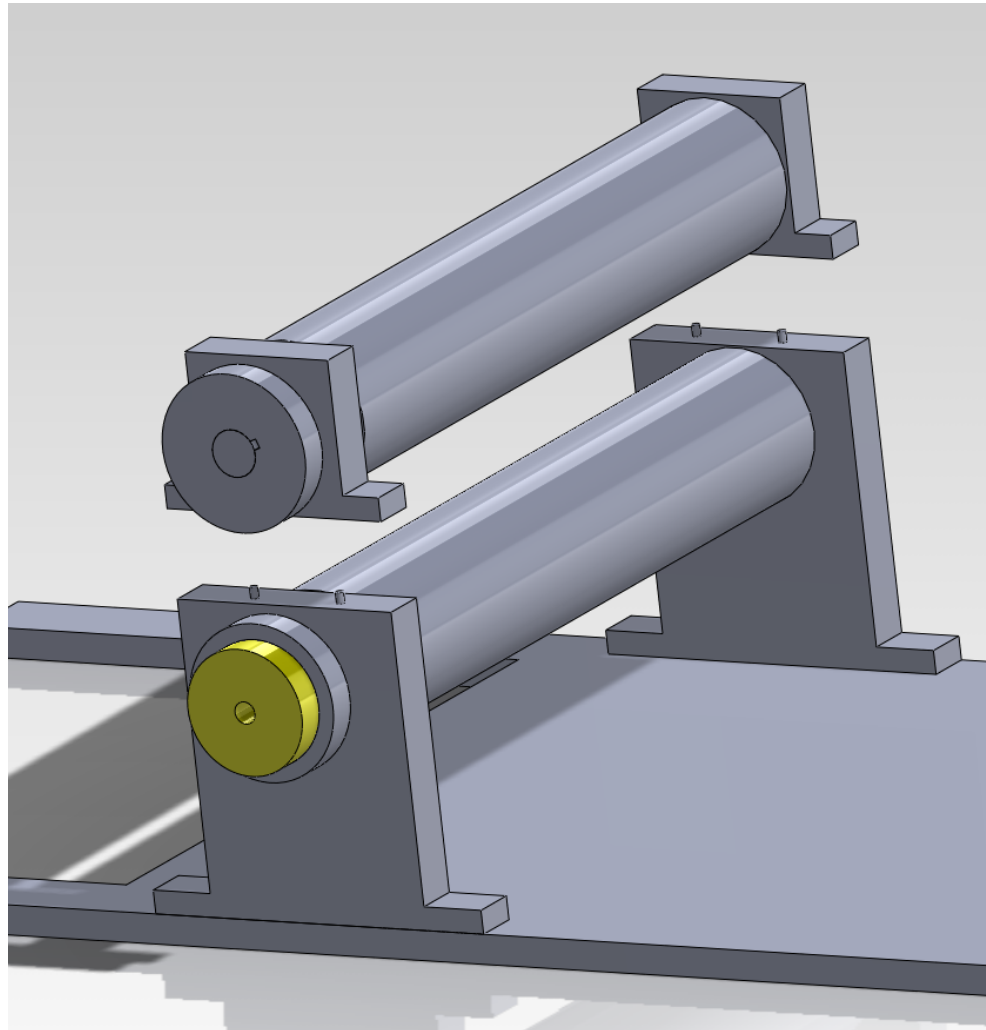
Piano roll scanner



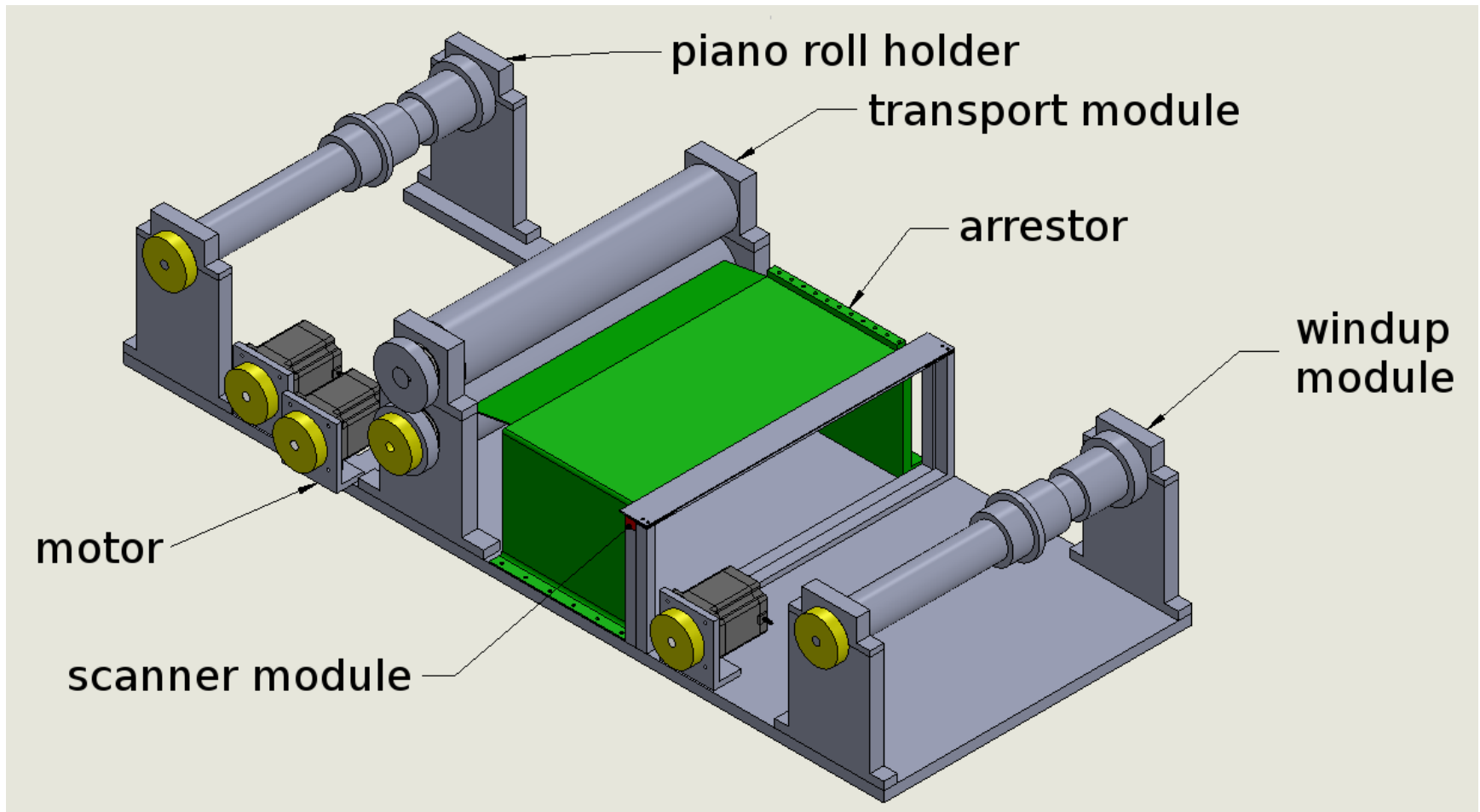
Piano roll scanner



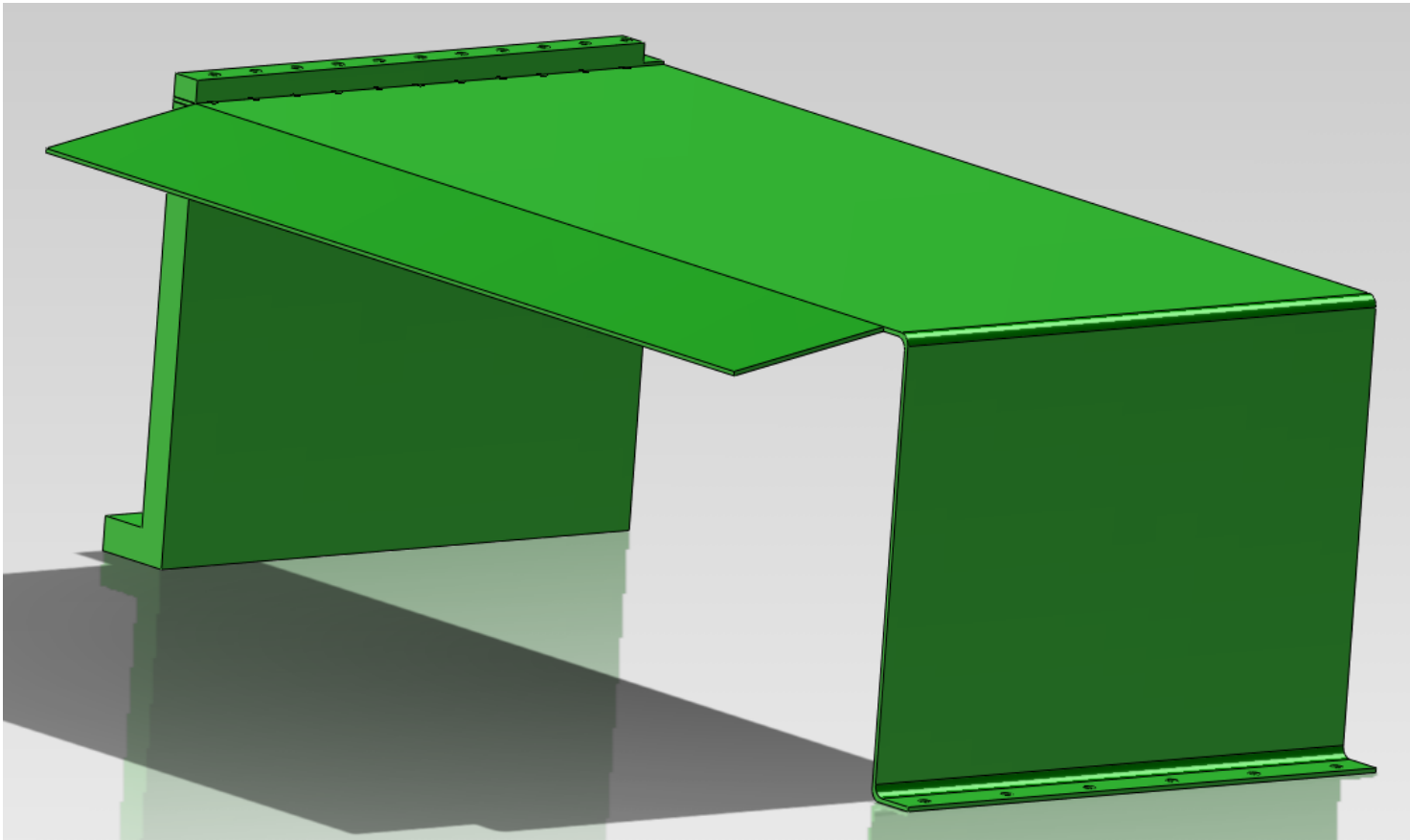
Piano roll scanner



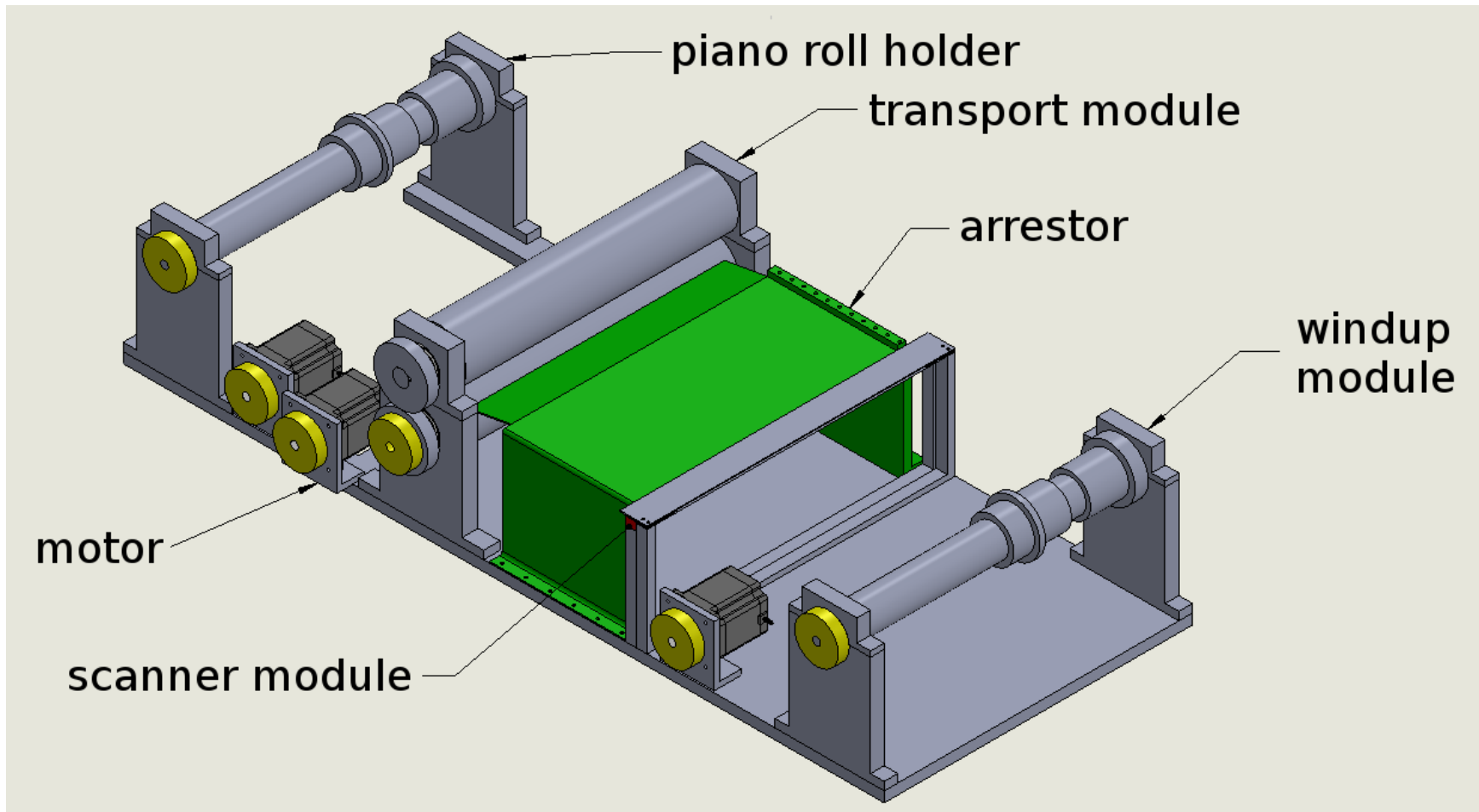
Piano roll scanner



Piano roll scanner



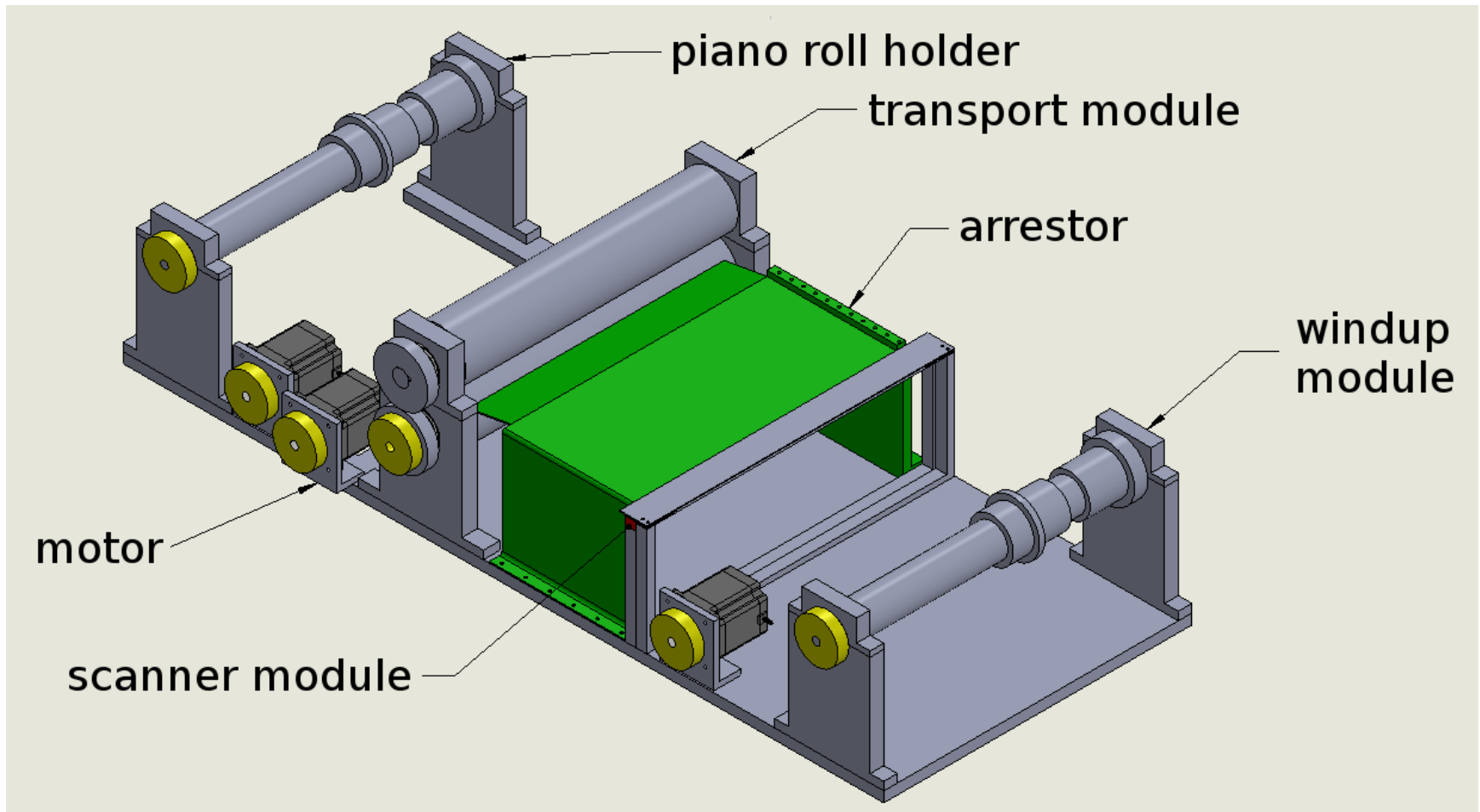
Piano roll scanner



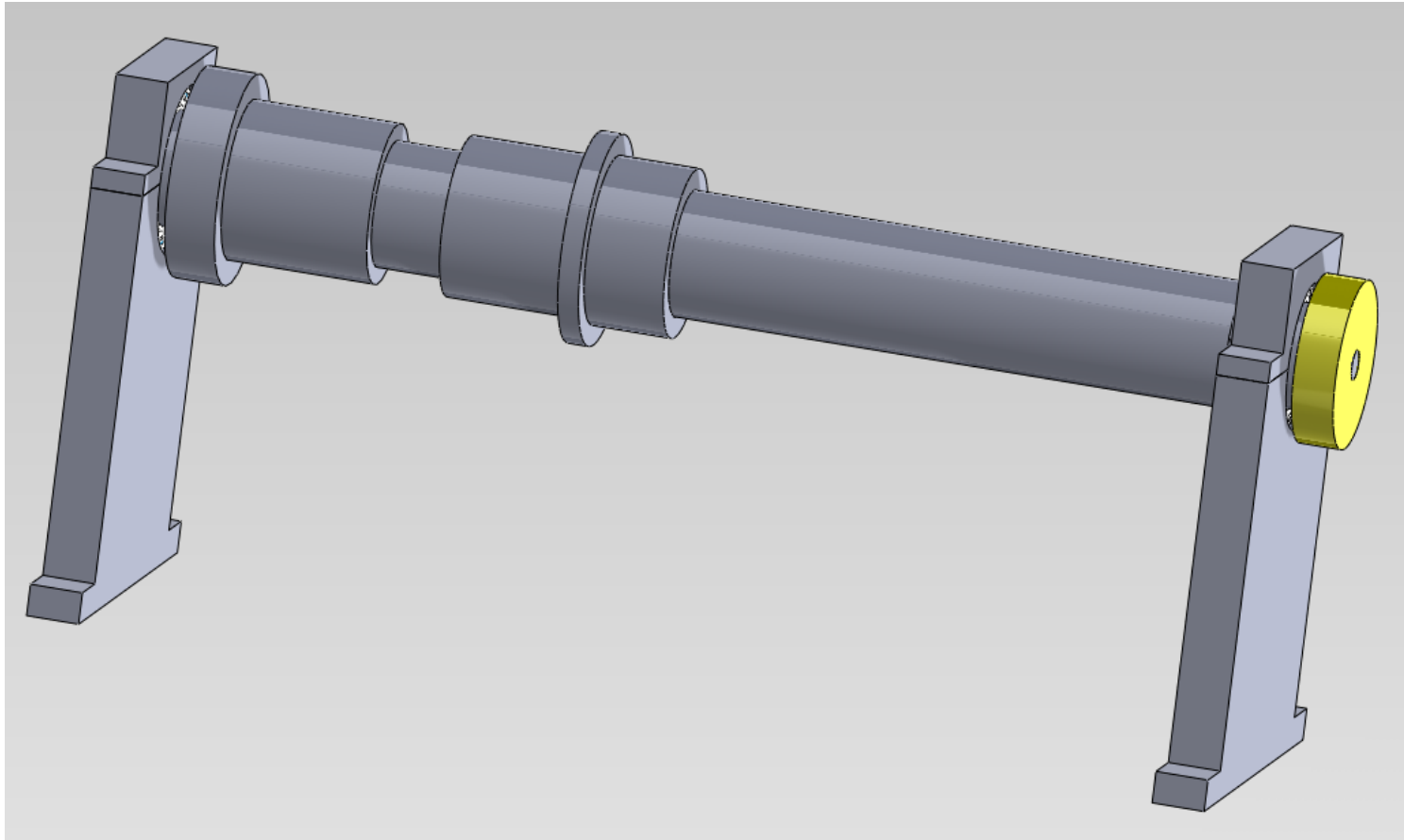
Piano roll scanner



Piano roll scanner



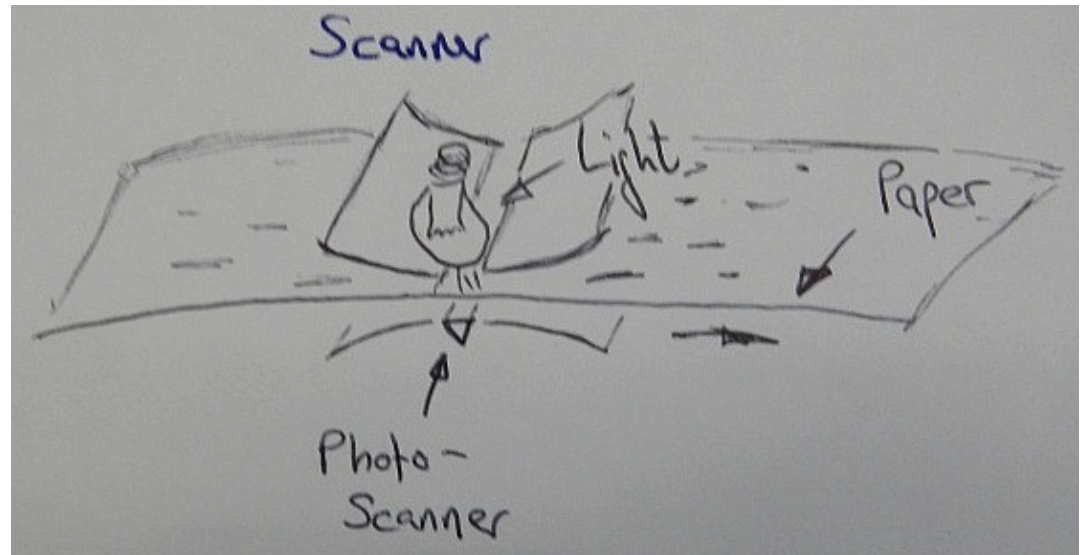
Piano roll scanner



Scanner



- CIS Scanner
- 1200dpi
- 0.72 s per inch
- 33min per 70m

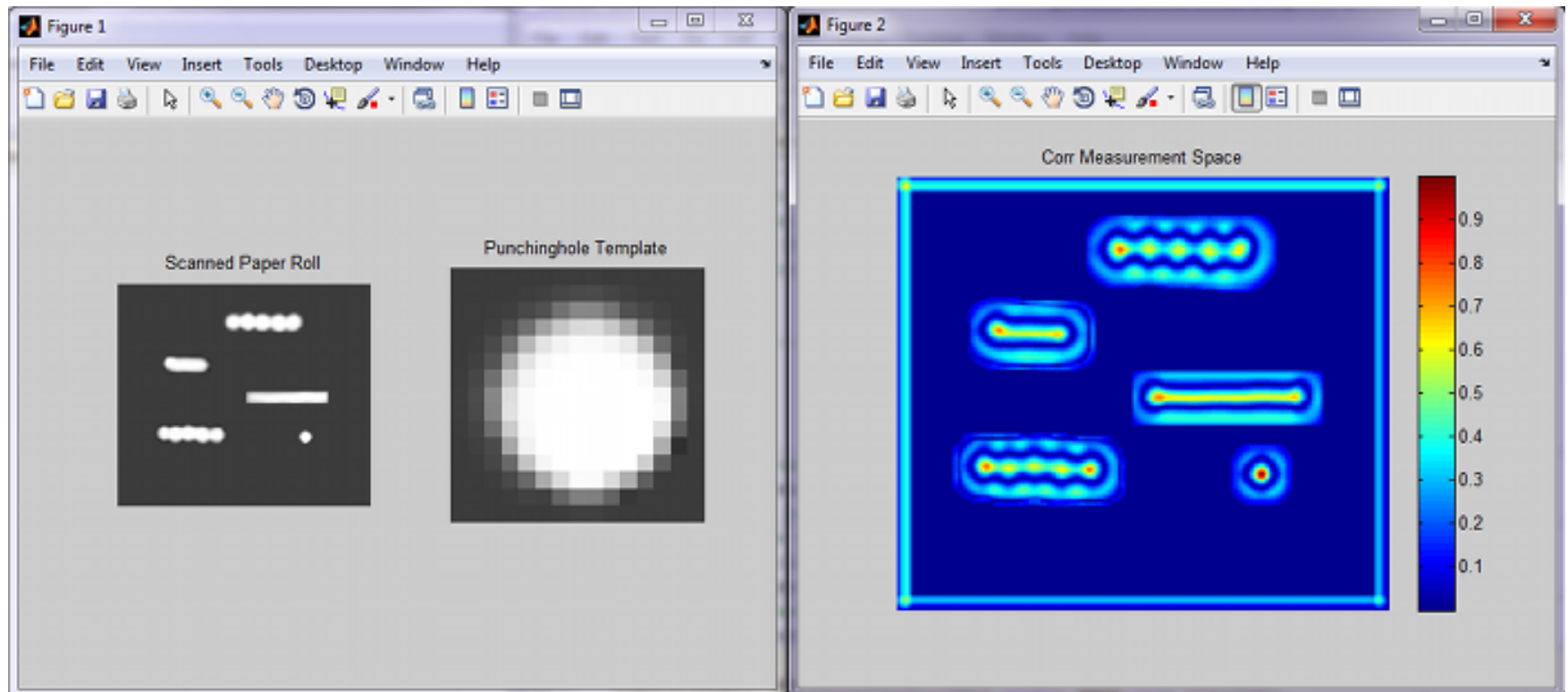


Data processing



- Central moment calculation
- Connected component labeling
- Template matching algorithm

Data processing



Conclusion



- Flexible data output
- Positioning
- Expensive scanner

Further works



- Smaller
- Better speed recognition
- MIDI output

Thank you!



- Any questions?