

Sprint plan 3

Bachelor Graduation Project: Model-based Optimization and Visualization of Aircraft Noise

Team: Elvan Kula and Hans Schouten

User Story	Task	Task Assigned To	Estimated Effort per Task
The user wants the project team to keep the source code maintainable	<ul style="list-style-type: none">- Set-up project structure following MVP model	Hans	3 Hours
The user wants to visualize the input flight trajectory and the produced noise contours in a real-time 3D animation mapped on Google Earth	<ul style="list-style-type: none">- Set-up Google Earth plugin in the GUI	Hans	4 Hours
	<ul style="list-style-type: none">- Extended visualization of noise contours in Google Earth with animated colour map	Hans & Elvan	5 Hours
	<ul style="list-style-type: none">- Extended animation of flight trajectory in Google Earth (+ smoothening data)	Elvan	4 Hours
	<ul style="list-style-type: none">- Compose all components in animation together (airplane, trajectory, contours)	Elvan	4 Hours
	<ul style="list-style-type: none">- Real-time updates of the animated trajectory and noise contours (+ tweaking the refresh rate)	Hans & Elvan	6 Hours
The user wants to visualize smooth noise contours produced along the input trajectory	<ul style="list-style-type: none">- Implementation of spline interpolation algorithm to smoothen out the contour lines	Elvan	4 Hours
The user wants to calculate noise contours for particular noise levels (dB)	<ul style="list-style-type: none">- Implement option to output actual noise data	Hans	2 Hours
	<ul style="list-style-type: none">- Implement option to turn on or off particular noise contours for calculation/ visualization	Hans	4 Hours

The user wants the project team to keep their emergent architecture updated in an iterated manner	<ul style="list-style-type: none"> - Process feedback of project coach - Update architecture of visualization component 	Elvan Elvan	1 Hour 2 Hours
The user wants the project team to implement the trajectory optimization model in an efficient manner	<ul style="list-style-type: none"> - Read and analyse the documents on trajectory optimization (provided by client) <ul style="list-style-type: none"> • NoiseLAss documentation • AC Model • Optimization of Departure and Arrival Routing for Amsterdam Airport Schiphol 	Hans & Elvan	2 Hours 2 Hours 3 Hours