

APLIKASI KOORDINAT PARALEL DI DALAM RUANG DIMENSI 4 PADA DISPLAY LALU-LINTAS PESAWAT

Title	APLIKASI KOORDINAT PARALEL DI DALAM RUANG DIMENSI 4 PADA DISPLAY LALU-LINTAS PESAWAT
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Abstract	<p>This research aims to describe n-dimensional line on a parallel coordinate and uses the representation as a display of aircraft motion which flies at a straight line and constant velocity. A parallel coordinate of n-dimensional space depicted in the form of n parallel vertical lines which represent axis. Every two adjacent axes have the same distance. A horizontal line that cuts all axes indicates the initial points of each axis. In a parallel coordinate, an n-dimensional point is represented as a polygonal chain where the vertices located on its axis. Based on the representations of some of collinear points, a line is described on a parallel coordinate. On the other hand, one can consider a graph of an aircraft motion as a graph of a 4-dimensional space. At a constant speed with a straight line orbit, the graph of an aircraft movement is a graph of 4-dimensional line. The result shows that, on a parallel coordinate, an n-dimensional line represented as $n-1$ dots. As a consequence, the graph of an aircraft that move at a constant speed with a straight line orbit represented as 3 dots. By this representation, the coordinate and altitude of the aircraft can be observed at anytime. It also shows whether the movement of an aircraft disturb (strike or too close to) another plane or not. Keywords: parallel coordinate, n-dimensional space, aircraft movement display</p>
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Author	HARTONO, M.Si