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Flying Around the World: A Journey into Map Projections.

During to horrible rerouting, I recently flew around the world: Dallas-London-Seoul-Dallas. Trying to console myself, I did a quick estimate the frequent flyer miles I'd rack up by computing the length of the middle parallel in this journey. This, however, turned out to be a significant overestimate. Why was this such a bad estimate? How could I do better, using either naive estimates or some differential geometry? These questions give us a way to introduce to students or reinforce basic concepts associated with map projections. (Received September 15, 2014)