1044-54-236   **John S Kulesza*** (`jkulesza@gmu.edu`), Mathematics Department, MSN3F2, George Mason University, Fairfax, VA 22030. *Relating the Product and Union of Pairs of Metric Spaces in Terms of Dimension.* Preliminary report.

We investigate the relationship between the dimension of products and unions of separable metric spaces. In particular, we present, for $n \geq 0$, a pair of separable metric spaces X and Y, such that dim $X \times Y = n$, while $X \cup Y$ admits a consistent separable metric topology with dim $X \cup Y = 2n$. For n at least 2, these examples solve a problem of Chatyrko in the "Open Problems in Topology" book. (Received September 02, 2008)