1044-54-148 **Zbigniew Piotrowski*** (zpiotr@math.ysu.edu), Youngstown State University, Department of Mathematics, One University Plaza, Youngstown, OH 44555, and **Eric J. Wingler**. *An Extension of the Closed Graph Theorem for Separately Continuous Functions.* Preliminary report.

In 1991 we have showed [Real Analysis Exchange] the following Theorem: Let X and Y be topological spaces with Y being locally connected and Z locally compact. Then any closed graph function f : X x Y -> Z having continuous y-sections and connected x-sections, is continuous. Hence, as an immediate consequence we have that if X is locally connected, Y is locally compact and f : X -> Y is a connected mapping with closed graph, then f is continuous. (apply the theorem to the function f* : 0 x X -> Y , defined by f*(0,x) = f(x)). In 2005, M.R.Wojcik and M.S.Wojcik [Real Analysis Exchange 30] generalized the above result keeping the same assumptions on the considered spaces and x-sections, but relaxing the condition on y-sections to "at least one section is continuous". Knowing that connected and closed graph functions f : R -> R are continuous, they asked whether this result is also true for real-valued functions defined on the plane. Jiri Jelinek [Acta Univ.Carolin.Math.Phys.44(2003)]answered this question, in the negative, by constructing a clever, yet elementary example of a discontinuous connected closed graph real-valued function from the plane. We will generalize our Theorem by relaxing the closed graph condition to closed fibres (= preimages of points are closed) (Received August 30, 2008)