

Decompositions of complete bipartite graphs into prisms revisited

or

Odvolávám, co jsem odvolal, a slibuji, co jsem slíbil

Dalibor Froncek, University of Minnesota Duluth

A *generalized prism*, or more specifically an $(0, j)$ -prism of order $2n$ (where n is even) is a cubic graph consisting of two cycles u_0, u_1, \dots, u_{n-1} and v_0, v_1, \dots, v_{n-1} joined by two sets of spokes, namely $u_1v_1, u_3v_3, \dots, u_{n-1}v_{n-1}$ and $u_0v_j, u_2v_{j+2}, \dots, u_{n-2}v_{j-2}$.

The question of factorization of complete bipartite graphs into $(0, j)$ -prisms was completely settled by the author and S. Cichacz. Some partial results on decompositions of complete bipartite graphs have also been obtained by S. Cichacz, DF, and P. Kovar, and on decompositions of complete graphs S. Cichacz, S. Dib, and DF. The problem of decomposition of complete graphs into prisms of order 12 and 16 was completely solved by S. Cichacz, DF and M. Meszka.

I will report on the latest, rather chaotic development. Or, as the famous saying goes, I will retract what I have retracted, and promise what I have promised.

Keywords: Graph decomposition, cubic graph, generalized prism