1135-92-1489 **Aida Abiad** (aidaabiad@gmail.com), **Elie Alhajjar** (ealhajja@gmu.edu) and **Pavel Avdeyev*** (avdeyev@gwu.edu), VA 20147, and **Martin Balko** (balko@kam.mff.cuni.cz), **Garner Cochran** (gcochran@math.sc.edu), **Kenan Ince** (kince@westminstercollege.edu) and **Gelasio Salazar** (gsalazar@ifisica.uaslp.mx). *Rectilinear Crossing Number.* Preliminary report.

A rectilinear drawing of a graph G is an embedding of G into the plane such that the vertices of G are mapped to distinct points, and an edge connecting two vertices are mapped to the straight segment joining the corresponding points. In a rectilinear drawing, edges are allowed to cross, but an edge may not contain a vertex other than its endpoints. The rectilinear crossing number of G, $\overline{\mathrm{cr}}(G)$, is the smallest possible number of pairwise edge crossings in a rectilinear drawing of G. We investigate rectilinear crossing number of partite graphs. Namely, we discuss the following two problems.

The first problem is to establish the relationship between rectilinear crossing number and crossing number of 4-partite graphs. We show that there is a 4-partite graph, whose rectilinear crossing number and crossing number differ.

The second problem is Zarankiewicz's Conjecture for the complete bipartite graph $K_{n,m}$ with n and m vertices in its partite vertex sets. We consider a special case of Zarankiewicz's Conjecture under the extra assumption that the partite vertex sets are separated by a straight line. We describe the current progress of proving Zarankiewicz's Conjecture in this case. (Received September 22, 2017)