DYNAMION - A New Multiparticle Simulation Program for High Current Ion Linacs, A. KOLOMIETS, I. VOROBYOV, S. YARAMISHEV, ITEP; J. KLABUNDE, GSI - The features of the newly developed multiparticle simulation code DYNAMION is presented. It solves the general three dimensional equations of charged ion motion in arbitrary external fields taking into account the internal space charge forces. External fields can be defined by analytical formula, measurements or field tables calculated by means of computer codes like MAFIA. The code has been tested by simulation of GSI accelerators such as the 27 MHz-RFQ, 108 MHz-RFQ and ALVAREZ. The results are compared with data obtained by other simulation codes - PARMILA, PARMTEQ, PARMTRA. Especially, DYNAMION has been developed for beam lines including strippers and bending magnets. The space charge effects of the beam composed by ions of different charge states can be computed.