Important part of communication systems is their capability to support mobility of user's devices, eventually of program and data components. This thesis deals with methods of mobility solution in the Internet and Wireless networks. In the chapter relating to the Internet it describes of mobile extensions of IP protocol and methods which use domain names. It summarizes positives and negatives both approaches and suggests a new approach based on distributed hash tables. A part of thesis is also a simulation model of the suggested approach. In the part about Wireless networks it summarizes existing wireless technologies and compares their access to mobility. In the conclusion it states a concept of a full mobile node that uses maximum from the methods discussed above and illustrates the possibilities that the mobility offers.