The more the popularity of wireless networks grows the more threats appear of being attacked or misused, either intentionally or by accident. This bachelor work describes security protocols in use, such as WEP, WPA and WPA2, analyses their vulnerabilities and discusses the danger of possible attacks against them. As the security protocol itself cannot entirely protect any wireless network there are additional security measures suggested that minimize the risk of a successful attack. One of the goals was to prove experimentally that WEP is really as bad a protocol as it is said and should not be used for securing any networks not even the home ones. In connection with that a survey has been made examining how wireless networks in Prague are secured, what protocols are used. This survey showed an alarming fact that most wireless networks are still using deprecated protocol WEP or no security protocol at all.