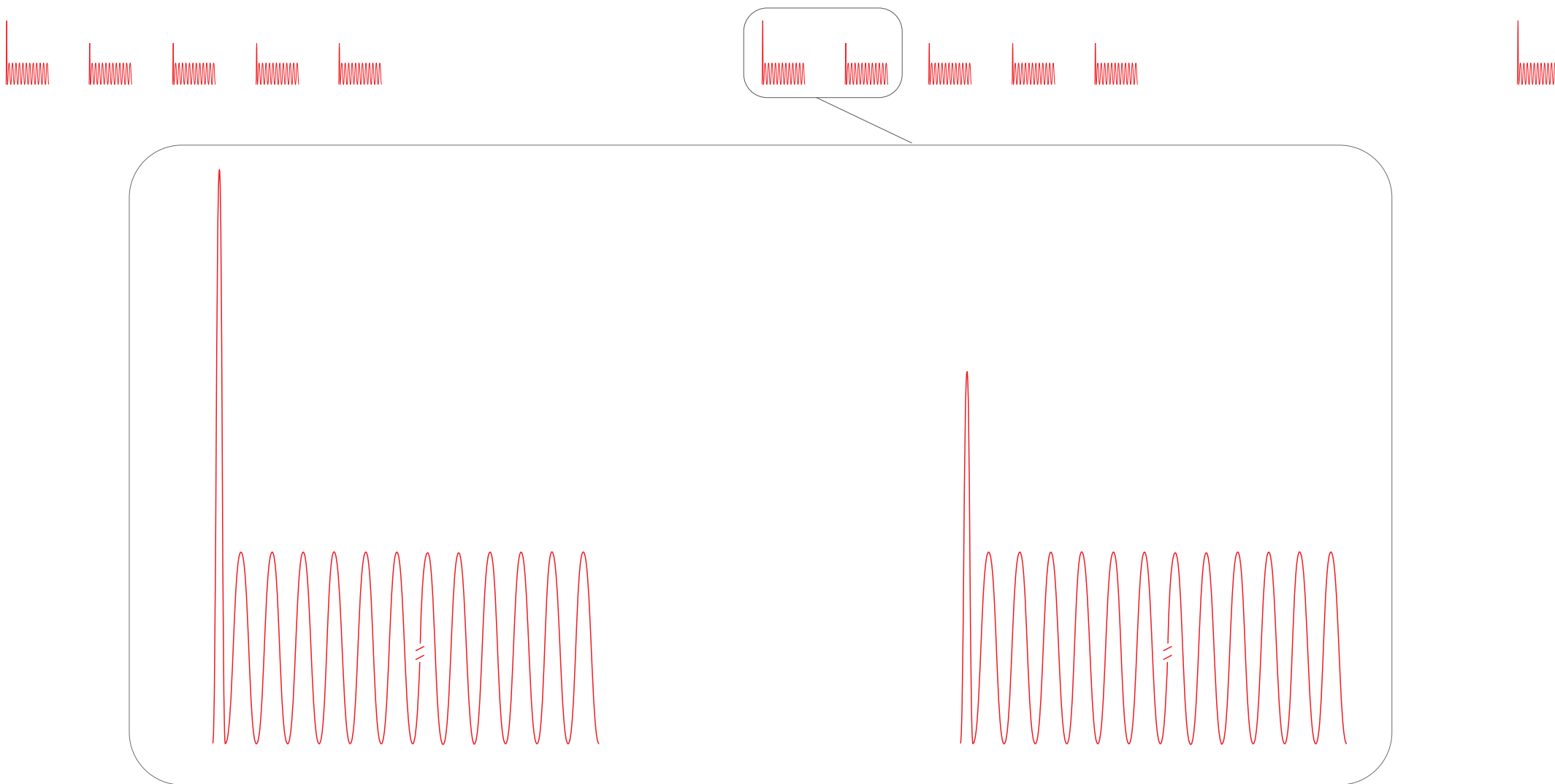


The radio technology that is being used in a mobile telephone is a time multiplexed multi frequency system consisting of seven frequencies. 2 are used for internal data control and 5 are for speech transmission. In order to serve more than 5 users at the same time the system is timed multiplexed, meaning that each user gets a slot in the time domain. The speech is digitalized, and each of the frequency sequences below represents a 0 or a 1. The biggest time gap between the periods of 5 sequences below represents the time multiplexing where there is no communication with the phone. This happens so rapidly that it is perceived as continuous speech, much like a TV where still pictures put together rapidly is perceived as continuous movement. Each sequence generates a high frequency transient in the beginning, and the first sequence after each time multiplexing has an even worse transient. This is a simplified sketch of a common mobile telephone radiation:



This is a simplified sketch of how the mobile telephone radiation when the protection technology is in use. Notice that the high frequency transients are reduced to a minimum and that all waves have softer peaks. This altered radiation has the same effect for communication purposes, but the damaging effects on living organisms is almost eliminated:

