Abstract: A system for locating a mobile wireless device is configured to communicate with a wireless communications system via a control plane and a user plane. The user plane includes a data channel, and the system includes a server configured to communicate via the data channel with a wireless device to be located. The server obtains from the wireless device information useful for tasking the wireless location system. The information useful for tasking may include information indicative of at least one cell site neighboring a serving cell site with which the wireless device is communicating. This may include information indicative of a serving cell site, a reverse channel through which the wireless device is communicating, and/or a hopping pattern, etc. The system may be used, for example, in connection with a GSM or UMTS wireless communications system.
1. A system for locating a mobile wireless device configured to communicate with a wireless communications system via a control plane and a user plane, wherein the user plane comprises a data channel that supports data transmissions from a wireless device, wherein data signaling payload contents in the data channel passes through the wireless communications system without examination or modification, and wherein the data channel payload does not inform, control, or modify the operations of the functional elements of the wireless communications system, comprising:
   a server configured to communicate via said data channel with a wireless device to be located, and to obtain from said wireless device information useful for tasking a wireless location system.

2. A system as recited in claim 1, wherein said information useful for tasking comprises information indicative of at least one cell site neighboring a serving cell site with which the wireless device is communicating.

3. A system as recited in claim 2, wherein said information useful for tasking comprises information indicative of a serving cell site with which the wireless device is communicating.

4. A system as recited in claim 2, wherein said information useful for tasking comprises information identifying a reverse channel through which the wireless device is communicating with a serving cell site.

5. A system as recited in claim 4, wherein said information identifying a reverse channel comprises a frequency assignment.

6. A system as recited in claim 4, wherein said information identifying a reverse channel comprises a channel number assignment.

7. A system as recited in claim 1, wherein said information useful for tasking comprises radio channel information.
8. A system as recited in claim 7, wherein said radio channel information comprises
information indicative of specific receivers which may be used to locate the wireless device.

9. A system as recited in claim 8, wherein said information indicative of specific receivers
includes information identifying a serving cell.
63. A method for locating a mobile wireless device configured to communicate with a wireless communications system via a control plane and a user plane, wherein the user plane comprises a data channel that supports data transmissions from a wireless device, wherein data signaling payload contents in the data channel passes through the wireless communications system without examination or modification, and wherein the data channel payload does not inform, control, or modify the operations of the functional elements of the wireless communications system, comprising:

configuring a server to communicate via said data channel with a wireless device;

obtaining from said wireless device information useful for tasking a wireless location system; and

tasking said wireless location system using the information obtained from said wireless device.

64. A method as recited in claim 63, wherein said information useful for tasking comprises information indicative of at least one cell site neighboring a serving cell site with which the wireless device is communicating.

65. A method as recited in claim 64, wherein said information useful for tasking comprises information indicative of a serving cell site with which the wireless device is communicating.

66. A method as recited in claim 64, wherein said information useful for tasking comprises information identifying a reverse channel through which the wireless device is communicating with a serving cell site.

67. A method as recited in claim 66, wherein said information identifying a reverse channel comprises a frequency assignment.

68. A method as recited in claim 66, wherein said information identifying a reverse channel comprises a channel number assignment.
69. A method as recited in claim 63, wherein said information useful for tasking comprises radio channel information.

70. A method as recited in claim 69, wherein said radio channel information comprises information indicative of specific receivers which may be used to locate the wireless device.

71. A method as recited in claim 70, wherein said information indicative of specific receivers includes information identifying a serving cell.
115. A method as recited in claim 114, wherein said wireless communications subsystem comprises a radio receiver and a radio transmitter, and wherein said processor and computer readable storage medium are configured such that said LDP device is primarily limited to use as a gaming device.

116. A method as recited in claim 63, further comprising providing said server in the form of a location enabling server (LES) comprising a processor and a computer readable storage medium, and configuring said LES to communicate with a gaming server and said wireless location system so as to provide government-regulated gaming services to said wireless device.

117. A method as recited in claim 116, wherein the provision of said gaming services is based on the geographic location of said wireless device.

118. A method as recited in claim 117, wherein said processor and computer readable storage medium are configured such that said LES receives requests from said gaming server and provides information to said gaming server, wherein said information is useful by said gaming server in determining what, if any, gaming services are to be provided to said wireless device.

119. A method as recited in claim 118, wherein said processor and computer readable storage medium are configured such that said LES receives requests from said gaming server and requests location information from said wireless location system.

120. A method as recited in claim 63, wherein said method is performed in connection with a GSM wireless communications system.

121. A method as recited in claim 63, wherein said method is performed in connection with a UMTS wireless communications system.

122. A computer readable medium comprising computer readable instructions for instructing a location enabling server (LES) in performing a method for locating a mobile wireless device configured to communicate with a wireless communications system via a control plane and a user
plane, wherein the user plane comprises a data channel that supports data transmissions from a
wireless device, wherein data signaling payload contents in the data channel passes through the
wireless communications system without examination or modification, and wherein the data channel
payload does not inform, control, or modify the operations of the functional elements of the wireless
communications system, said method comprising:

configuring said LES to communicate via said data channel with a wireless device;
164. A computer readable medium as recited in claim 128, wherein said radio channel information comprises information indicative of a pilot PN offset.

165. A computer readable medium as recited in claim 128, wherein said radio channel information comprises information indicative of a reverse pilot channel format.

166. A computer readable medium as recited in claim 128, wherein said radio channel information comprises information indicative of a beta parameter.

167. A computer readable medium as recited in claim 128, wherein said radio channel information comprises information indicative of a long code mask.

168. A computer readable medium as recited in claim 128, wherein said radio channel information comprises information indicative of a spreading factor.

169. A computer readable medium as recited in claim 122, wherein said method comprises the use of an IP-based (Internet protocol-based) interface for communications between the server and the wireless location system.

170. A computer readable medium as recited in claim 169, wherein said IP-based interface employs XML (extensible markup language).

171. A wireless device adapted for use with a system for locating mobile wireless devices configured to communicate with a wireless communications system via a control plane and a user plane, wherein the user plane comprises a data channel that supports data transmissions from a wireless device, wherein data signaling payload contents in the data channel passes through the wireless communications system without examination or modification, and wherein the data channel payload does not inform, control, or modify the operations of the functional elements of the wireless communications system, comprising:
   a wireless communications subsystem;
   a processor; and
a computer readable storage medium;

wherein said device is configured to communicate via said data channel with a server used by said system to provide to said server information useful for tasking a wireless location system.

172. A wireless device as recited in claim 171, wherein said wireless communications subsystem comprises a radio receiver and a radio transmitter, and wherein said processor and
226. A method for use by a wireless device configured to communicate with a wireless communications system via a control plane and a user plane, wherein the user plane comprises a data channel that supports data transmissions from a wireless device, wherein data signaling payload contents in the data channel passes through the wireless communications system without examination or modification, and wherein the data channel payload does not inform, control, or modify the operations of the functional elements of the wireless communications system, comprising:

communicating via said data channel with a server to provide to said server information useful for tasking a wireless location system to locate said wireless device.

227. A method as recited in claim 226, wherein said information useful for tasking comprises information indicative of at least one cell site neighboring a serving cell site with which the wireless device is communicating.

228. A method as recited in claim 226, wherein said information useful for tasking comprises information indicative of a serving cell site with which the wireless device is communicating.

229. A method as recited in claim 226, wherein said information useful for tasking comprises information identifying a reverse channel through which the wireless device is communicating with a serving cell site.

230. A method as recited in claim 226, wherein said information identifying a reverse channel comprises a frequency assignment.

231. A method as recited in claim 226, wherein said information identifying a reverse channel comprises a channel number assignment.

232. A method as recited in claim 226, wherein said information useful for tasking comprises radio channel information.
233. A method as recited in claim 226, wherein said wireless device is a location device platform (LDP) device.

234. A method as recited in claim 226, wherein said wireless device is configured to operate in connection with a GSM wireless communications system.

235. A method as recited in claim 226, wherein said device is configured to operate in connection with a UMTS wireless communications system.
236. A method as recited in claim 226, wherein said device is configured to operate in connection with a CDMA 2000 wireless communications system.

237. A method recited in claim 226, wherein said device is configured to operate in connection with a WiFi wireless communications system.

238. A method as recited in claim 226, wherein said device is configured to operate in connection with a WiMax wireless communications system.

239. A computer readable medium comprising computer readable instructions for instructing a mobile wireless device in performing a method to assist a system for locating the wireless device, said wireless device configured to communicate with a wireless communications system via a control plane and a user plane, wherein the user plane comprises a data channel that supports data transmissions from a wireless device, wherein data signaling payload contents in the data channel passes through the wireless communications system without examination or modification, and wherein the data channel payload does not inform, control, or modify the operations of the functional elements of the wireless communications system, said method comprising:

   communicating via said data channel with a server to provide to said server information useful for tasking a wireless location system to locate said wireless device.

240. A computer readable medium as recited in claim 239, wherein said information useful for tasking comprises information indicative of at least one cell site neighboring a serving cell site with which the wireless device is communicating.

241. A computer readable medium as recited in claim 239, wherein said information useful for tasking comprises information indicative of a serving cell site with which the wireless device is communicating.
242. A computer readable medium as recited in claim 239, wherein said information useful for tasking comprises information identifying a reverse channel through which the wireless device is communicating with a serving cell site.

243. A computer readable medium as recited in claim 239, wherein said information identifying a reverse channel comprises a frequency assignment.

244. A computer readable medium as recited in claim 239, wherein said information identifying a reverse channel comprises a channel number assignment.