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The diagram illustrates a network architecture divided into two main sections by a dashed line: the PoC Layer (top) and the Mobile Network (bottom).

PoC Layer:

- 10 PoC Bridge:** A central component in the PoC Layer.
- 11 PoC Call Processing Server:** A component in the PoC Layer that provides **Group Communication Services**.

Mobile Network:

- MS (Mobile Station):** Represented by a mobile phone icon, connected to the **Radio Interface**.
- Radio Interface:** Connects the MS to the **Radio Access** cloud.
- Radio Access:** A cloud containing a **BTS (Base Transceiver Station)** and a **BSC (Base Station Controller)**.
- GPRS (General Packet Radio Service):** A cloud containing a **SGSN (Serving GPRS Support Node)** and a **Backbone**.
- Connections:**
 - The **BSC** is connected to the **SGSN**.
 - The **SGSN** is connected to the **Backbone**.
 - The **Backbone** is connected to the **GGSN (Gateway GPRS Support Node)**.
 - The **GGSN** has bidirectional connections with both the **PoC Bridge (10)** and the **PoC Call Processing Server (11)**.

Labels and Text:

- PoC Layer** (top left)
- Mobile Network** (top center, above the dashed line)
- Radio Interface** (left, above the MS)
- MS** (bottom left)
- Radio Access** (center left, inside the cloud)
- BTS** (bottom left, inside the cloud)
- BSC** (center left, inside the cloud)
- GPRS** (center right, inside the cloud)
- SGSN** (center right, inside the cloud)
- Backbone** (center right, inside the cloud)
- GGSN** (center right, inside the cloud)
- 10 PoC Bridge** (top center, inside the PoC Layer)
- 11 PoC Call Processing Server** (top right, inside the PoC Layer)
- Group Communication Services** (top right, next to the PoC Call Processing Server)
- Mobility Management** (bottom right)
- QoS** (bottom right)
- Coverage** (bottom right)

(S7) Abstract: A packet mode (e.g. IP) group communication service layer is provided on top of a standard mainstream cellular radio network. Conceptually, the group communication layer comprises a pair of basic logical entities, an application bridge and a call processing server (CPS). The bridge and the CPS run group service applications which communicate with group service application(s) in a mobile station MS over the IP connections provided by the radio network. The CPS is responsible for control plane management of group communications. The bridge is responsible for the real-time distribution of VoIP packets to the user terminals according to their group memberships over valid connections programmed by the CPS.



ACTION

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