

# What and Why – Remote Invocation

## What?

Brew Mobile Platform (Brew MP) now includes additional services to enable component infrastructures on multiple processors to talk to one another across the boundaries of the chip. The **Component Services Gateway** running on the chip – whether a Qualcomm chip or not – facilitates **remote invocation** of objects and services from neighboring chips.

The gateway allows developers to create instances of objects on remote processors or cores and invoke them as if they were local objects. They can break their software into pieces and let it migrate across processors.

Remote invocation makes Brew MP APIs callable outside their own implementation environment. As an example, Qualcomm's 8650 contains three different cores: ARM 9, Scorpion and QDSP6. Assume that each runs an instance of Component Services, and that there aren't enough cycles left to run the vocoder on the ARM or the Scorpion. The vocoder can migrate through the gateway to the QDSP6 core and the users of the vocoder software, which are sitting in Scorpion, can still create an instance of the object. That instance would sit on the QDSP6, but users can call into it as if it were local.

## Why?

Remote invocation can improve security by limiting access to protected data. Remoting should be used to protect instances from unauthorized changes when there are different memory space process domains.

As far as developing software goes, the wider advantage of remote invocation is that, once bugs are fixed for one chipset, they're fixed for all chipsets, because it's the same set of files running in different environments.

## Run with It

In the Brew MP C API Reference, see:

IRemoteCall, IRemoteControl, IRemoteInterface, IRemoteObject, IRemote Skel