A critical issue of distributed systems is concerned with the advertising task. Current solutions require an ex-ante agreement on a common shared language. Although such an approach is feasible from the technological point of view, it is not effective in practice. The process of managing this agreement may present social implications that make the solution difficult to achieve. Recent trends in research propose a new approach based on advertising games where the agreement on a common language is produced at run time. Nevertheless up to now such a model has been studied only through simulations with standalone platforms. Our contribution is the design and the development of the first web services oriented architecture for advertising games. Therefore we approached all the issues typical of distributed systems neglected by the simulators like asynchronous communications, denial of services, and so on. Finally we present a real world application where the architecture has been deployed to support the advertising task using an advertising game model.