
DAN WILSON, Invidi Technologies Corporation

Challenges of Centralized and Distributed Control for Addressable Advertising

The increased flexibility and efficiency of addressable television advertising incurs a similar increase in the complexity and difficulty of management and measurement. Many of the problems that arise are highly amenable to stochastic modelling. Three problems are presented. The first, a centralized problem of shared resource allocation, deals with both long and short-term prediction of collisions between commercial breaks across sets of networks. The second, prediction of audience sizes given complex targeting criteria, involves centralized control mixed together with distributed decision making. A third problem highlights the difficulty of correctly pacing the delivery of advertisements when final delivery decisions are made probabilistically by end-user devices in the face of lossy and slow two-way communication with those devices.