Call Centers

Optimization of multichannel operations in modern call centers

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Research

The chair "Call Centers" aims at proposing novel solutions for the operations management and optimization of multichannel call centers. It consists of adapting operations to the exponential growth of the technological progress while accounting for the human element, which is one of the most important features in call centers. In particular, the chair addresses the following research questions:

 Routing with high identification level for customers: In the new context of Web-RTC systems, the classical routing of customers to agents is no longer appropriate. Agents are becoming more and more active in selecting the jobs they handle. The objective is to study the effect of this change on performance and on agent behavior: are we converging toward a situation of hyper-specialization, or a situation with an increasing number of skills per agent?

Advertizing during waiting: analysis of the impact of advertizing parameters on the customer behavior in commercial call centers. The objective is to understand how advertising may intensify or reduce the abandonment phenomena.

Methodology

- Quantitative approach for operations management
- Stochastic models
- Queueing systems
- Markov chains
- Markov decision processes
- Empirical analysis

Contributions

- Recommendations and insights for call center managers
- Contributions to the literature of service operations management
- Contributions to the literature of stochastic processes
- Scientifique approach for the developpement of Interactiv Group products in order to make them more flexible and performant

Publications

B. Legros, O. Jouini, Z. Aksin and G. Koole (2020) Front-office multitasking between service encounters and back-office tasks. European Journal of Operational Research, 287(3):946-963.