

## Service Logistics

Session organizer: Ruud Teunter, University of Groningen

In today's society the role of advanced technical systems is becoming more and more important. Hospitals cannot function without perfectly functioning medical equipment. Airlines are strongly dependent on high availabilities of their airplanes. Factories depend on high availability of their machines. No company or governmental organization can function without a well functioning computer and communication network. Obviously, because of the high dependency on availability of all these systems, a smart concept for the maintenance/availability management is very important.

First of all, one would like to prevent as many failures as possible, e.g. via condition-based maintenance, where the status of critical components may be measured by sensors or event logs. Second, for the failures that one cannot prevent, one wants to have well organized processes so that downtimes of systems are minimized. Upon a failure, it is then important that spare parts, service tools, and service engineers are quickly available. Third, economies of scale are desired for all these activities. For forecasting of failures, learning effects in diagnosis, pooling effects for spare parts and other resources, it is necessary that one has a certain scale. This scale is not obtained by individual users of systems but by either Original Equipment Manufacturers or third parties. This leads to all kinds of questions with respect to service contracts, service level agreements, and customer differentiation.

The above topics are the central issues within the area of "service logistics". At the ISIR Conference, we will organize a stream on sessions on this topic. Scientific contributions can be made on e.g. the following topics:

- Spare parts management
- Condition-based maintenance, and its effect on spare parts provisioning costs
- Inventory models for spare parts and service tools
- Scheduling of service engineers
- Design of spare parts networks
- The effect of remote monitoring and diagnostics on total costs
- Service contracts and customer differentiation
- The effect of design decisions for new systems on their Total Cost of Ownership
- New business models for collaboration between users
- Game-theoretic models on the relationship between OEM-s, third parties and users

If you are interested in joining these sessions, then please do the following:

- Send me an email so that I know that you will submit an abstract (r.h.teunter@rug.nl). If you are not sure whether your topic would fit, then please send me an abstract on the basis of which I can form an opinion.
- You submit your abstract via the web site for the ISIR conference: <http://www.isirsymposium2012.hu>. Deadline: **March 31, 2012**. When you submit you can denote that you want to join the sessions on service logistics. By the end of April 2012 you will hear whether your abstract has been accepted and whether it is incorporated in the service logistics sessions.

As ISIR is focused on inventory research, we want these sessions to have a large enough portion of inventory-related talks. This will be taken into account when accepting abstracts for these sessions.

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