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— for Exchange Server

**Real Time Scheduling
in
Workforce Management**

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Introduction

Customer Service is rapidly becoming the primary differentiator for organizations competing for marketplace success. Customers have increasing expectations of extraordinary service from the vendors and suppliers and service differentiation is increasingly difficult when everyone is chanting “We are driven by customer service”. Customer loyalty is key and every call a customer makes is another opportunity to either impress them or lose them to a competitor. Driving their expectations is a convenience-centered economy where consumers are highly valued and unaccustomed to waiting for answers.

At the same time, all organizations are challenged to efficiently deploy their customer service, maintenance, account reps, and other resources such as equipment and facilities.

Organizations have the opportunity to apply advancements in IT systems to meet this challenge faster, better, and with less cost. By leveraging existing investments in IT infrastructure, organizations can turbo-charge their enterprise applications to deliver outstanding customer service with scheduling platforms that work for both the customer and the service provider. Delivering customer satisfaction has become a competitive business strategy.

The Scheduling Challenge

While customers appreciate the advances in technology and business practices, they view the delays, inefficiencies and communication gaps as unacceptable performance by the service provider. Expectations of convenience, value, and information are likely to escalate over time.

This places new demands on organizations providing service at the same time as these organizations are trying to do more with less. Rising costs, shortages of qualified personnel and tighter margins can make outrageous demands on existing business practices.

Knowing who to send or make available at what time has always been a challenge for service providers. Cost effective delivery of high quality service has become increasingly challenging.

Customer demands require organizations to be increasingly precise and accurate when providing information and service, as well as when they schedule appointments. It is no longer acceptable to say that “we can get there sometime later this week, I think” or “do our best”.

Providing service that shrinks customers' waiting time and safely optimizes resources is a complex feat. It entails ensuring that field resources are at peak efficiency and follow a route that minimizes unproductive travel time. Or the challenge of making specialized personnel available with firm booking dates and times. But the challenge remains: how does an organization achieve such efficiency when appointments are taken for a given day, weeks in advance, in a large geography.

The traditional approach of Job Queuing or Bucket Scheduling does not provide the level of customer service demanded by customers. These approaches are focused on internal business processes that leave the customer not knowing exactly when they will get what they want. Advances in real time workforce scheduling provides choices and solutions for customers within seconds, while still giving the service organization the efficiencies they require to control costs.

Traditional Job Queuing Scheduling

The traditional approach, and still the most common, to managing the workforce for daily operations and crisis situations is generally known as Job Queuing or Bucket Scheduling. In this approach, the work to be done is divided into categories or types of work. A fixed number of work hours is allocated for each work type during specific times of the day. With this approach, at the beginning of each day, the dispatcher examines the commitments taken and the resources available in each period and attempts to fit one with the other.

The disadvantages of the job queue schedule comes from its disconnect with the reality of day to day work and customer expectations. It is difficult to commit to a customer for a fixed appointment time with any level of certainty because work is assigned to periods, not particular times. The order in which a technician's work is done during a given shift is usually not managed. Customers can only be given periods, typically no shorter than half a day, during which a crew or individual will do their best to get there.

Also, although the number of hours of work that can be performed during any period is known, the identity of the resources that make up that availability is not known. Thus, if a resource needs to be absent for a particular day in the future, it is difficult to know what the impact of this absence will be, since work is not assigned to any particular technician or resource ahead of time.

Resources are often overbooked and appointments missed which has a negative impact on customer satisfaction. Conversely if the service organization increases the number of hours in the 'bucket', this may lead to resources having less work to do than their shift duration could allow. In either case, the management is done reactively, not proactively.

Real Time Workforce Scheduling

In the real-time approach to scheduling, also referred to as individual workforce scheduling, the work schedule of each individual technician is established ahead of time, for each day in the future. As work orders are created in the system, each is assigned immediately to a particular technician or resource team, for a particular date and time.

Further, modern real time scheduling systems sort out the complexities of geography, skill levels of employees, equipment availability, and personnel availability which relieves the operator or scheduler of having to know or understand. Real time scheduling platforms should interface into existing IT systems such as CRM, ERP, OSS, HR, or other legacy enterprise applications to leverage inventory and logistical information available within the operations.

Advantages

The real-time solution has a number of advantages. First, with this approach, it is possible to schedule appointments to exact dates and times rather than within periods, thus better serving customers. Second, it is also possible to know in advance exactly which technician is assigned to each order, so that if technicians need to be absent, dispatchers know exactly what appointments will be affected.

Furthermore, technicians or teams can find out in advance what orders are assigned to them individually, not only for the current shift, but for future days as well. Consequently, technicians traveling to remote parts of the territory can check if any of their work for future shifts is also located in that area, and then complete that work all in the same visit. Similarly, a field technician finishing the assigned work for the day can look at his/her assignments for upcoming days and get started on them. Real-time scheduling empowers field workers to manage their work more efficiently and consequently enjoy it more and bring more value to the organization.

Also, with this approach, workload leveling is not as restricted as with the bucket approach. If, on a given day, the workload of the various crews is unequal, it can be leveled across days and areas of the territory, not just within one bucket. For example, if all crews in a sector are overbooked, some of their workload can automatically be transferred over to under booked crews in other sectors, allowing fewer commitments to be missed. Alternatively, assignments that are not appointments with customers can be rescheduled to less busy days.

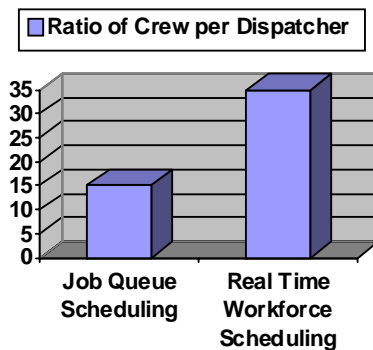
The most effective real-time approach incorporates a mobile communication link between the field crews and the dispatcher so that analysis and monitoring of job progress is truly performed in real-time. In this way, information necessary for effective short- and long-term decision making relating to distributing work is available at all times. Further, efficient communications to the field also supports field information exchange and applications.

Return on Investment (ROI) of Real Time Workforce Scheduling

“Clearly, truly real-time scheduling with current information flowing from and to the field crews enhances the flexibility and overall effectiveness of this approach. It has been estimated that having a real-time mobile link between field environment and office boosts the effectiveness of workforce management by at least 60 per cent.”

- CGI White Paper

Real Time Workforce Scheduling can cut morning dispatch workload down by as much as 95 per cent because only the exceptions require attention.



A major global telecommunication company has reported direct savings of 20% in the staff required to schedule customer service appointments. As well as improving customer service, real-time scheduling can help companies become more efficient.

In short, real-time scheduling empowers telecommunication and utility companies to optimize their procedures and workflows by enhancing job scheduling and load leveling functions. It provides more real-time,

consolidated information on resources, their availability and their jobs, to help better forecast, plan and re-assign resources as needs change. Truly real-time scheduling enables service organizations to stay in control and cost-effectively provide the service levels necessary for customer satisfaction.

Real Time Workforce Scheduling is an Enterprise Decision Management tool that integrates with existing IT investments and systems. It is an operational tool for front line workers who interact with customers. It draws information from, integrates to, and sends information to potentially a wide variety of CRM, ERP, and OSS enterprise management systems already in place. It also integrates into the corporate communications backbone, Microsoft Exchange, to leverage these investments into line of business operational support systems.

“eOptimize Real Time Workforce Scheduling is an after market turbo-charger for traditional enterprise applications”

- James Taylor
Smart (enough) Systems

How Real Time Scheduling Works

1. CUSTOMER CALLS

- Request service or activation
- Wants to schedule appointment



2. CONTACT CENTER



- Queries AboutTime real time scheduling engine
 - i. What resources are required to do customer request
 - ii. What skills required to do job
 - iii. What geography is involved
 - iv. What other resources (rooms, equipment, trucks, etc)
 - v. Queries calendars to determine free busy information
 - vi. Queries CRM, ERP, OSS or other existing systems
- **Within Seconds** AboutTime delivers feasible options
 - i. "Tomorrow at 3PM is available"
 - ii. "Friday, this week, at 10AM"
 - iii. "Next Tuesday at 1PM is also available"

3. CUSTOMER SELECTS DATE AND TIME

- "Next Tuesday at 1PM would be great"



4. JOB APPOINTMENT SCHEDULED

- AboutTime instantly updates
 - i. All affected calendars
 - ii. All affected resource pools
- Emails sent to customer and internal resources (optional)
- Documents attached to appointment (optional)
- Mapping info for mobile workforce attached (optional)



RESULTS

- 20% reduction in cost of scheduling
- 2-10% better utilization of people and resources to do job
- Fewer missed appointments
- Happy customers who received fixed appointment within 1 minute of placing a call

Conclusions

Scheduling customer service is a vital customer contact interaction with any organization. It provides a window of opportunity for the enterprise to deliver its vision of seamless service delivery. The next generation real time workforce scheduling solutions will contribute greatly to meeting the expectations of the empowered and demanding customer who will insist on a smooth, efficient, and personalized encounter. It will serve service delivery organizations by reducing waste and efficiency

While both approaches are viable, the adoption of the real-time scheduling approach offers greater advantages, most notably enhancing customer satisfaction through more accurate service scheduling. Software technologies such as the eOptimize AboutTime real time workforce scheduling platforms are readily available in the market today. Many organizations are already moving ahead in this direction. If you decide to pursue this approach or want more information, please consider eOptimize as a viable vendor partner to assist you. As the leading provider of real time workforce scheduling software solutions and associated services, we can help you gain the maximum benefits to meet your business needs.

About eOptimize

eOptimize is a privately held company based in Vancouver, British Columbia, Canada. We provide dynamic workforce scheduling solutions and platforms that solve business resource issues in real time. Our goal is to provide organizations and partners with sophisticated scheduling solutions and platforms that are powered by our proprietary constraint based algorithms.

eOptimize has created a powerful enterprise scheduling engine. The core scheduling functions are implemented by proprietary algorithms developed from leading operational and constraint-based research and proven in the field by global customers.

As a global provider of enterprise scheduling solutions, we are solely focused on delivering an integrated suite of software and services that let's global enterprises optimize their human and other resources for lower costs and improved customer satisfaction.

Our customers and partners include telecommunications companies, financial services companies, medical clinics, hospitals, as well as software firms that serve those markets.

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