Behind the Scenes, MacDermid, Inc. Automates With Robot/REPLAY®

By Bob Balderson

Sometimes what's behind the scenes can be even more impressive than what's up front. Take MacDermid, Incorporated, a massive international business that researches, develops, manufactures, markets, and services specialty chemicals and systems for metal and plastic finishing, electronics, graphic arts, and offshore oil industries. Founded in 1922 in Waterbury, Connecticut, their Advanced Surface Finishing division has become one of the leading specialty chemical manufacturers in the world. And, since the early 1960s, they have been an integral part of the rapidly changing electronics industry by developing numerous products used to manufacture sophisticated electronic devices. All behind the scenes, but very impressive.

A company like this needs fast, reliable, processing power, so they turned to the IBM iSeries. Karen Tablan, a Financial Systems Business Analyst for MacDermid, Inc. explains, "At our main headquarters in Waterbury, Connecticut, we have three iSeries: One for our Enterprise Resource Planning (ERP) system, one for sales information, and one as our Lotus Notes server. On the software side, we use JBA for our ERP system, GBA as our Fixed Asset System, and Infinium for HR and payroll. The ERP system iSeries houses all of our Help/Systems products—Robot/SCHEDULE® [automatic job scheduling], Robot/ALERT® [pager and e-mail messaging], Robot/REPORTS® [report management], Robot/REPLAY [interactive job automation], and Robot/SAVE® [automated backup, recovery, and tape management]."

Today, MacDermid, Inc. is a classic example of the power and efficiency of iSeries automation. But, it wasn't always that way. As Karen explains, "We bought Robot/SCHEDULE and Robot/REPORTS in 1995 as our first two Help/Systems products. At that time, we had an operator running things manually each night. We started by automating our report processing. We used Robot/SCHEDULE to schedule our reports and Robot/REPORTS to archive them. We added Robot/REPLAY in 1998 because of a combination of the year 2000 conversion, an iSeries upgrade, and an upgrade to new JBA software. Earlier, we had actually hired a consultant to modify our Distribution Requirements Planning (DRP), Materials Requirements Planning (MRP), and Materials Scheduling Planning (MSP) programs so we could schedule them. But now that we were converting to a new level of JBA, we did not want to have to carry all those modifications forward."

Karen knew there had to be a better way. "I researched Robot/REPLAY and found that it could save us lots of time because many of our scheduled jobs were interactive. Robot/REPLAY fit in easily—just bring up the screen, fill in the parameters, and you're done. You don't need any programming knowledge. Why rewrite the code for an interactive application when you can use Robot/REPLAY?"

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When Karen started automating, only the daily schedule was automated. Her first tasks were to automate the weekly, monthly, quarterly, and yearly schedules. As she explains, "At that time, the schedule was entirely reactive (event-driven) jobs. It was hard to figure out what ran when because each job depended on another. I converted the schedule to a few, larger, group jobs, which I love. Group jobs are also reactive, but it's a lot easier to look at a few large group jobs versus hundreds of smaller ones. After I converted the schedule to group jobs, I used Robot/REPLAY to automate the interactive ones. Now, about 80% of our jobs are scheduled through Robot/REPLAY."

A large number of jobs and multiple schedules were no problem for Karen. "We had over 200

jobs in Robot/SCHEDULE that run during multiple times throughout the day and during the month. Our daily schedule is Tuesday through Saturday, and on Saturday we add a weekly schedule. We use a combination of Robot/REPLAY jobs and normal batch processing—a group job with reactive jobs, some interactive processing, and some batch processing. We use reserved command variables with Robot/REPLAY because a lot of parameters are date-driven. Once Robot/REPLAY has 'learned' an object, I go back and attach the date reserved command parameter to a particular screen for either the current date or the current date plus a certain number of days. For example, when we run an MRP process, it runs daily, and it runs 30 or 90 days out. We use reserved command variables for an accurate date range. I run queries for a certain date range and with reserved command variables and Robot/REPLAY, you can learn the query, rebuild it, and run it after hours. That's much better than running it during high usage daytime hours."

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Karen was so relentless about increasing their efficiency, she earned the title of 'CPU Police' from her users. "Monday mornings, lots of users used to run lots of reports, which meant that the system crawled. I got mad because sometimes shipments wouldn't get out because a report was running. So, I said, 'If you are going to run these reports every week, tell me what you're running and I'll schedule them so they'll be ready for you when you get here Monday morning.' Scheduling takes a huge load off the machine. It lets you run things when you want to, in the proper order, with no major impact on your daytime machine use."

Now, MacDermid, Inc. no longer needs an operator in the classic sense. "We run our system totally lights out. We are running three different companies with different schedules. The only operator function remaining is loading tapes for the save. We can even IPL using Robot/SAVE and restricted state saves. We automated our restricted states saves on Monday morning so we don't have to come in and run backups on weekends."

With the combination of Robot/REPLAY and Robot/SCHEDULE, automation was easy, efficient, and profitable. Karen elaborates: "First, we didn't need a programmer. Second, we reduced the amount of Operations staff. Third, we improved our system performance because we schedule and run jobs more effectively and efficiently—we run more jobs after hours, or during periods of low resource consumption."

Karen also is very happy with Help/Systems' training and support. "Help/Systems' products are straightforward. I didn't take any classes or training; most of it I learned by trial and error, or from the manuals. For example, I taught myself Robot/REPLAY without ever taking a class. The support is outstanding, so if I hit a wall trying to figure something out, I used tech support to answer the tough questions. When I called Help/Systems, I never had a problem getting an answer. A couple of years ago, Help/Systems sent out a certificate stating that if anyone had a problem with support, they could get a year of free maintenance. I thought, 'Oh! I want that!' You know, to save money. But, I can't do it in good conscience because there's never been a problem. I imagine it's because of the people—I don't know where Help/Systems gets them, but they are super. Help/Systems has a great crew." All in all, a very nice tribute to the automation experts behind the scenes—Help/Systems, its people, and its products.