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JMP Engineering and New Electric Partner to Retrofit Rogers Centre's Iconic Retractable Roof

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TORONTO, ON – Recently, Rogers Centre, home of the MLB Toronto Blue Jays and a sports and entertainment landmark since 1989, completed a massive retrofit to the many systems that open and close its expansive retractable roof.

The Rogers Centre's roof and its systems had been meticulously maintained from the outset; however certain parts and components had been discontinued over the years, making the original technology outdated and difficult to maintain. As time went on, opening and closing the roof became more challenging. "I always equate it to this: Not many people are still driving a car they had 20 years ago," said Dave McCormick, Engineering Manager, Rogers Centre.

The roof, which consists of three moving panels and one fixed piece, is 282 feet high at its center and covers 8 acres. Two of the panels slide under the fixed panel, then the final panel rotates around the stadium and into place until the four panels resemble a stack of plates. When opening or closing the roof, it has to be capable of quickly, reliably, and precisely moving 11,000 tons of steel in winds up to 40 miles per hour blowing from varying directions.

"As much as fans love seeing the sky, in this stats-heavy game, baseball fans also believe the Blue Jays do better when the roof is open which has made the roof an integral part of the game and the fan experience," said Mark Niesner, Director of Operations and Organizational Development, New Electric, the general contractor for the Rogers Centre's roof-related renovations.

To continue meeting the expectations of fans and promoters, the roof's infrastructure required significant upgrades, including a new OT (Operations Technology) network and control system, which help management determine when to close the roof and provide them the ability to once again do so reliably. "Basically, what this project was about was getting this structure and the operating system back to a state where it can sustain for the next 15 to 20 years," explained McCormick.

Successful replacement of the aging stadium roof OT network and controls system was completed through a number of organizations working in partnership. New Electric, acting as prime and electrical contractor, provided project management, electrical solutions and mechanical support. Rockwell Automation and Cisco provided product and technical expertise. Gerrie Electric provided product and assisted in testing and design. JMP Engineering provided the knowledge, experience and execution of the design installation and commissioned the entire control system.

Rogers Centre selected the team due to their combined proven expertise in successfully delivering critical projects. It was also important to Rogers that the partners had the ability to locally service and support the system during and over the life of the roof. For over 10 years, New Electric has managed Rogers Centre's requirements, for everything from the roof and its power and control systems to its concession stands and ATMs, lights and the Blue Jays' locker rooms. As a result, New Electric really understands Rogers Centre, its culture and unique requirements.

"Looking ahead, Rogers Centre committed to leading edge, proven technology to meet today's standards," said Steve Szamocki, Executive Vice President of Sales and Marketing, JMP Engineering.

“Twenty-five years ago, this technology was leading edge, but increasingly, these legacy systems had become a challenge to support effectively and efficiently.”

“Rockwell Automation is excited to have our PowerFlex® variable frequency drive solutions and ControlLogix® PLC’s be a cornerstone of this highly visible and critical roof modernization project”, said Mike Laszkiewicz, Vice President & General Manager, Power Control Business, Rockwell Automation. “Rogers Centre will now be able to achieve greater efficiency and reliability by integrating the roof system with the network and our control system, a vision that Rockwell Automation calls the Connected Enterprise.”

Completion of this retrofit required approximately two years, $10 million and close to 30 people simultaneously working full-time on the renovation. Thanks to the upgrades, the roof once again performs optimally, easily and with absolute reliability. To help Rogers Centre keep fans dry, New Electric also installed a rooftop weather station that tracks weather systems to predict when the rain or cold front will arrive.

While the opening and closing still requires a full crew to operate safely, the control system now only needs one person to monitor the process. The entire process can be completed with a 46% speed improvement as compared to the legacy control system. Also, of significant value to Rogers Centre, the enhanced functionality of the modern control system and its supporting OT network provides fault tolerance, self-diagnostics, and reporting previously not available, allowing the operator an easy and quick way to trouble-shoot and rectify any issues, should they arise.

“As general contractors, we can take on far more than the electrical and had the resources to accommodate Rogers Centre’s incredibly full event schedule,” said Niesner. “We don’t come in to just hook up wires – we’re here to help Rogers Centre give the fans a fantastic experience.”

“JMP Engineering was proud to work with the teams at Rogers Centre, New Electric, Gerrie Electric, Cisco and Rockwell Automation on such a large, mission-critical controls project for such an esteemed Canadian landmark,” noted Szamocki.

About JMP Engineering:
www.jmpeng.com

JMP is an engineering services company with 14 locations in the U.S. and Canada, focusing on Fortune 500 manufacturers and producers. The company provides engineering services and turnkey solutions in the areas of process automation, control system integration, smart robotic applications, and information and analytic solutions. JMP has delivered over 15,000 solutions to more than 1,000 clients worldwide since 1987, and has been recognized with awards, including the Control Engineering System Integrator Hall of Fame, the Packaging Digest Integrator Hall of Fame, the Microsoft Impact Award for Data Management Solutions, and has been nominated by our employees four years in a row for the “Top 50 Great Places to Work in Canada” for medium-sized companies.

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