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*Kirt Berwald,  
State of Michigan  
Department of Technology  
Management and Budget*

## CASE STUDY

### *Michigan Department of Corrections Uses InRule® to Manage Offender TimeComp*

**The Michigan Department of Corrections (DOC)** is comprised of 22 correctional facilities with a statewide prison population exceeding 40,000 offenders.

For each felon housed within the Michigan DOC, the sentence handed down by the justice system is one of several factors that determine the length of time he or she will spend behind bars. An offender’s sentence can be reduced by credit for time served, participation in prison work or education programs and good behavior. Conversely, a sentence can be extended due to bad behavior, refusing drug or alcohol testing or conviction of additional charges.

With so many factors affecting the prison sentence of thousands of convicted felons, management of the daily sentence calculation, “timecomp,” is extremely rule intensive and complicated—and the stakes are high. The formulas used for timecomp must align with how sentences should be calculated. Setting a felon free before the completion of their sentence creates fear in the community and distrust of the law enforcement and corrections organizations.

In addition to calculating the sentence for offenders, the Michigan DOC must have timecomp calculations for the 60,000 individuals who are on parole. Both the offender and the victim have access to timecomp information.

## PROJECT OVERVIEW

For several years, the Michigan DOC sought to migrate away from an aging mainframe system, however the organization’s extensive requirements for timecomp hindered the modernization initiative, and Michigan DOC personnel wondered if it was even possible to automate such complex processes.

While on the mainframe, a team of programmers was tasked with manually writing and calculating the timecomp rules and logic in spreadsheets and documents. As if that wasn’t complicated enough, the timecomp rules had to be modified at least once each year to align with evolving policies and legislation. The elaborate nature of the rules and calculations and the fact that a large team had to manually confirm and compute timecomp left the State DOC vulnerable to miscalculations and errors.

In 2013, the Michigan DOC began upgrading its offender management systems. The first phase of the corrections modernization included timecomp. The Michigan DOC turned to InRule® to allow a team of technical and business users to easily manage the logic and rules that dictate the time left in a felon’s sentence or parole.

## RESULTS

There are between 200 – 250 rules with more than 5,000 combinations of the logic that govern the Michigan DOC timecomp. While deploying InRule, a team of three created all of the rules in the timecomp system. The entire process, from software delivery, to deployment, to completion of rule authoring took 14 months.

From incarceration through probation, InRule tracks everything about an offender and helps the Michigan DOC process 12,000 transactions each day. The system is constantly in use to process complex logic and rules and has become an integral part of the way the Michigan Department of Corrections does business.

According to Kirt Berwald, general manager, State of Michigan Department of Technology Management and Budget, “As we began upgrading our offender management systems we were concerned that developing and deploying the business rule management system for timecomp would be the most complicated and highest risk part of the project. In the end, it became one of the most successful and the least risky thing that we did, and that was due to the technology we selected. InRule has made timecomp more efficient and accurate by making it easy for our teams to write and manage rules. It’s been a big win for us.”

## NEXT STEPS

The InRule business rule management system is perceived within the organization as an outstanding tool that has streamlined the process of timecomp. The Michigan DOC plans to grow the use of the tool in the coming years. shortage of areas within the business where InRule can provide value.