

Part 17: Dashboards

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“Data-driven decisions” is a phrase one hears almost daily. And why is this a major theme for our times, you might ask? Because it simply works. Examples are abundant in sports such as in auto racing, where millions of data bits are captured per second resulting in higher performance and much greater reliability, while pushing equipment to the edge of its capabilities (the same can be said for our daily passenger vehicles as well). In another example, Matt Kleiman, our colleague here at the NCSC, explained to us how data feedback allows him to train smarter for his favorite sport, road cycling. And we would guess that many of you have read the book “Moneyball” by Michael Lewis.

It explained how metrics transformed a downtrodden baseball team into a winner despite going against all “common sense.”

So the point of this article is to question “common sense” or “collective wisdom” in our courts and to look for new ways to use, and in particular, display the CCMS data that most systems have (or should have) to better manage their operations.

Picture : CCMS 15

Section I: Administrative Dashboards

The most common case management system dashboards that have been implemented often mirror standard court statistical reports. These reports can benefit court managers whether they are presiding/ chief judges or court administrators. And while they mirror traditional case management count reports, they have the advantage of being dynamic and therefore should be able to produce up-to-date case counts or snapshots monthly, weekly, or daily. Remember that an earlier article in this series discussed the fact that

Traditional case county court statistics only reflect the statistics at the moment they are captured. And as we all know cases are continually added, closed, reopened, etc. This is why trends are important because they show what is really happening in the overall flow of cases over time.

Administrative dashboards should also include the [NCSC’s Court Tools measures](#), such as this [example from the New Dawn Just Ware CCMS](#). Court Tools include useful performance measures such as clearance rates, age of active pending caseload, trial date certainty, collection of monetary penalties, and cost per case measures. (One measure that we hope will not be needed in most courts in the near future is “reliability and integrity of case files,” as discrepancies will be eliminated with electronic document management capabilities in the CCMS, and as E-filing will replace the majority of data entry/scanning labor for court staff.)

In [Part 16 of our CCMS series](#), we also discussed in more detail other measures that could potentially be built into the administrative dashboard. But most important is the ability for the

dashboard to display warnings, just as your automobile dashboard does when door is ajar or the oil pressure is low.

This is a real problem as this article from CNN reports that a New Mexico community “lost” an inmate in their system for 22 months resulting in a \$15.5 million settlement. Where was the check and balance that the court should have provided over the Sheriff’s Department? And while this failure was shared between the courts and criminal justice agencies, it isn’t the only monitoring failure that costs persons, businesses and organizations time and money.

Therefore, dashboard warnings should be displayed when an anticipated work/ task activity does not occur; or when the work tasks are not completed on time by unit or individual; or when a case is about to exceed the CCMS tickler setting.

Another heat map example shown below is interesting because it could reflect the size of the count by the length of the column bar. And clicking on one color on the bar could display additional detailed count information.

Lastly, this blog page shows several stock market heat maps that were updated in “real time” during the US stock trading day. And, as was suggested in the chart above, if one clicks on one of the stocks displayed, one can see the current price, statistics, and trends. Some of the ideas presented here might also provide some inspiration for future CCMS design requirements and/or development.

In this example the size of the boxes could correspond to the case count and the colors to the overall “health” of that caseload segment compared to the standard set by the court. It can be used to show cases that are consuming significant time and resources (number of filings, hearings, trial days). The chart could be used to monitor probation

caseload or domestic relations matters under court supervision. And this chart could be used to compile data for an individual judge, probation officer, social worker, or teams of individuals.

Section II: Judicial / Case Management Dashboards

Before we get started on this section, we must recognize the work of our now-retired NCSC colleague Mr. David Steelman, and other pioneers such as Harvey and Maureen Solomon, on the entire subject of case flow management. This discipline has been a cornerstone of modern court administration. And as Mr. Steelman writes:

“We study case management because case management is the way we get rid of waiting time, [by] which we control delay, [and by] which we enhance the purposes of courts.

Case management is what we’re about in controlling delay.” (footnote 33 in *CaseflowManagement, The Heart of Court Management in the New Millennium*)

(Note: The NCSC Resource Guide on the subject can be found at:

<http://www.ncsc.org/Topics/Court-Management/Caseflow-Management/Resource-Guide.aspx>)

Regarding case flow management, a dashboard can be used for tracking a particular case against the following measures:

Case processing time standards for that case type or case track
Performance measures of cases of the same type or case track – case clearance rate, case processing time, case backlog (snapshot), trial date certainty
Norms of continuances for that case type or case track.

Combining these into a dashboard is both possible and desirable. However, to this point we have not seen a graphical approach that really reflects case flow. So that brings us to our “big idea” that adapts case processing time standards and applies them to the concept of the **Gantt chart from project management** and, in turn, applies it to a future case management dashboard.

As shown below, we made the simple Gantt chart that identifies the different time standard “tasks” along with the time allocated to them beginning from case initiation:

Click on the graphic above to enlarge

So in this example, a civil matter (line ID 2) would start at filing. The filing date is shown graphically as a diamond or “**milestone**”. The next bar (line ID 3) shows that this court normally schedules 5 days to serve the defendant, and allocates the next 30 days to prepare the defendant’s answer, and so forth. The arrows between the bars denote a dependency on the prior task being accomplished before the next task is undertaken.

The next example below shows how a task can be added to the chart (ID 7 – Discovery Extension) and the dependencies in turn adjust the later tasks.

Click on the graphic above to enlarge Finally, shown below is an example of how the Gantt chart could display a delay in the case flow as designated by the red “squiggly” bar.

Click on the graphic above to enlarge Please also note that project management software has the ability to create levels of tasks so they can be displayed as expanded or contracted by the user or potentially by system rule depending on the phase or status of a case. The Gantt chart can also graphically display when a case would normally be scheduled for Case Management Conference and Trial. While this is interesting for a single case in tracking progress according to standard, it is not as useful as it can be when we group and compile the graphical information of multiple cases -- and thus we move on to the next concept.

Section III: Case flow Portfolio Display

Next, while the above Gantt chart concept is good for an individual case, it isn’t adequate for, say,

a judge's entire caseload. In project management a group of projects is called a portfolio. And **portfolio management** has its own set of goals such as prioritization, managing contingencies, and maintaining response flexibility. Sounds a lot like case flow

management, doesn't it? So for the case flow portfolio graphical display we can look at a couple of possibilities.

1. Calendar case flow portfolio display. As shown in the graphic below, this month is all "green." But one can imagine a future month when many cases, because of delays or other reasons, have turned dates red as a warning. And of course one could click on the date to see the reasons for the warning.
2. Judicial Warning Grid. In this scenario the cases for a judge would be grouped by case type and status as shown below (please note that the status types and numbers are an example and not a reflection of a real system).
3. Overall Court Caseload Portfolio Management. A graphic that shows the now discontinued Microsoft Portfolio Management system display. We believe that there are ideas here that could be adapted for an overall court caseload dashboard building upon the graphical reports shown above.

<http://www.microsoft.com/poland/project2007/project-portfolio-server.aspx>

But for courts, portfolio management can also potentially provide data to support process and policy changes. And since the portfolio has the possibility of being compared between judges and courts, it could more easily highlight issues that might be addressed.

Section IV: Conclusion

We believe that these graphical displays, combined with active case weighting and the proper application of case flow management concepts, will allow courts to set goals, monitor performance, and enforce accountability in real time via the CCMS in a much more accurate manner. This is particularly true when comparing this type of approach with judicial quotas and other raw counts that do not reflect case status, case complexity, or the myriad of reasons that case adjudication and resolutions are delayed. In summary, courts can be managed better with better information design.

