

After reviewing the study conducted by Pacific Technologies Inc. (PTI) related to Information Technology (IT) consolidation initiatives within North Dakota, I have the following observations and comments.

Two central themes of the report seem to be standardization and centralization. For several years the Judicial Branch has recognized the value in both consolidation and centralization of computing resources. In fact, during the past several years the Judicial Branch has been proactive in these areas as demonstrated by our actions, which include:

1. We have reduced the number of data servers in the court system from 9 to 4, with plans in place for further reductions. Similarly, we have reduced the number of email servers within the Judicial Branch from 9 to 1.
Both of these reductions are largely possible because of the availability and reliability of the state network, Stagenet, put in place by ITD and funded by the Legislative Branch.
2. We have reduced the number of AS400's running the Unified Court Information System (UCIS) from 6 to 1.
3. While decreasing the number of computers running UCIS, we have increased the installed base of people using the system to include all counties in North Dakota and 6 municipalities, totaling well over 400 enrolled users. This increase includes the East Central Judicial District and Cass County, which was largely made possible by funding from the 2001 Legislative Assembly.

To help bring about standardized computing platforms and contain costs,

1. We have implemented a Citrix-based thin client solution for nearly ½ of our computing devices. This allows us to provide centralized, standardized desktop computer services at a lower cost than a conventional PC. It provides remote control capabilities for troubleshooting; centralized administration and support of the devices.
It is the implementation of Citrix based computers which enable us to provide a higher level of support and technology to some of the more rural areas of the state and which enable us to adequately support the clerks of court as mandated through consolidation of those offices in 2001.
2. We have implemented purchasing processes which include centralized approval and purchase of the computers for all Judicial Districts. This aids in ensuring a higher degree of standardization and in lowering purchase and support costs, as described in the PTI report.

In addition to efforts related to consolidation and standardization, the Judicial Branch has taken a leadership role in data sharing with other government entities, including:

- Electronic traffic ticket processing with the Highway Patrol and the Department of Transportation to reduce workload and reduce redundant data entry while decreasing processing time.
- Electronic transfer of divorce information with the Health Department to reduce workload and reduce redundant data entry.
- Electronic transfer of Protection Order information between the Bureau of Criminal Investigation (BCI) and local law enforcement.
- Providing a web-based inquiry system for District Court case information to enable State's Attorneys, Law Enforcement, Department of Corrections and other authorized personnel direct access to the case details. We currently provide access to over 300 non-judicial personnel, including publicly accessible computers in many courthouses.
- Active participation in the State's Criminal Justice Information Sharing initiative.

Furthermore, it should be noted that the Judicial Branch cooperates with ITD on many services, including:

- Records retention services
- Telephone services
- Wide area network services
- Wiring services in courthouses
- Electronic document systems

- Video conferencing projects

In response to the PTI report, I have the following observations:

- 1) Cost
 - a) Page 3-2 identifies potential savings of \$529K. It should be more explicitly pointed out that this is a potential savings and does not include some startup costs and does not include some ITD management labor costs.
 - b) Page 3-10 identifies potential savings. Note that this table indicates the Judicial Branch can provide these services at a cost lower than ITD would be expected to provide the services.
 - c) The estimated \$1,000 per PC replacement cost is low. Currently, we budget an average cost of \$1700 for each laptop, desktop or thin client device.
 - d) Page 2-4 indicates that the 67 servers in non-consolidate agencies are being supported at a per server cost that is less than the 300 servers being supported by ITD. The reasons behind this should be elaborated.
 - e) With our AS400 upgrades, we have carefully considered purchasing services from ITD and have found that we can provide the service at a lower cost than we would be able to purchase the same services from ITD. For example based on our current processor usage, we estimate it would cost at least \$30,000 per month to have ITD provide similar processing capacity at their current rates. This compares to estimated costs that are less than \$5,000 per month when the hardware is purchased and maintained within the judiciary.
- 2) Service Level
 - a) Page 3-12 indicates "...some degradation..." of service would occur. If ITD is to provide these services, they should be expected to provide them with a baseline assumption that the service level would NOT degrade.
 - b) There should be enforceable service level agreements offered by ITD. The service level goals are inadequate as outlined in the report.
 - c) FASCES is a statewide application that resides on the ITD-hosted IBM mainframe and has 'application support' provided by Human Services. Over the past several years, we have observed instances of problems related to ownership of a support request. Application support personnel look to the hardware provider for answers and the hardware provider looks to the application support provider. This results in ineffective problem resolution and frustration for the end user.

If ITD is to provide level 1, level 2 and server support while agencies provide application support, it is likely that confusion over ownership of a problem will become commonplace. This would likely be caused by the fact that many symptoms could be caused by server, network, operating system or application problems. For example, if a user prints from a server-based application, it could be a problem with network configuration, server configuration, the application or the operating system. It is likely that the user will get shuffled from one support entity to another while the source of the problem is being determined.

We have implemented a one-call-for-help solution. Regardless of the problem, a Judicial Branch system user can call our help desk and receive assistance for any of their technical problems. This has been very effective and well received. Moving some support to ITD would alter this relationship and result in lower service levels being provided.

- d) Similarly, in the name of efficiency, ITD has implemented a strategy of changing printer out-queues once per week. Based on this recently implemented practice, a user can be forced wait up to a week for printing to be restored when problems arise.
- e) In the geographically distributed environment we have, a ratio of 200 computers to one support person is likely too high, when considering travel time etc.
- f) Moving all these services to the Executive Branch could result in the "Politicizing of Services". Governors and potentially the Director of ITD can be replaced every 4 years. This could subject the

Judicial Branch and Legislative Branch to potential political shifting of priorities and changing responsibilities.

Service priority, (determining who gets service first) can potentially become a political issue. Having a low service priority could effectively shut down an entity, or at least put it back to work-processes that pre-date computers.

- 3) Specialized needs
 - a) While everyone tends to believe they problems are unique, I am concerned that ITD may not have the resources to adequately provide support to several applications that have become central to the operation of the courts. These include :
 - i) Citrix servers and the applications that reside on them such as IV-D time reporting, juvenile case management software, data warehouse.
 - ii) WordPerfect which, presumably would NOT be the standardized office suite.
 - iii) Case Catalyst which requires a special hardware configuration.
 - iv) The web server which uses practices for updating that are developed and maintained within the judiciary.
 - b) Within the Judicial Branch, judges have a high degree of autonomy, forcing them to standardize on a single hardware configuration and a single software configuration could be difficult.
- 4) Questions have arisen regarding possible constitutional or privacy issues if another branch of government is to provide services currently maintained by the Judicial Branch, including email, UCIS and the Juvenile case management systems.
- 5) Staffing levels
 - a) Page 2-5 indicates 1.49 FTE for application development and maintenance. I will be reviewing this for accuracy and likely providing an updated survey. It should be noted that the same personnel doing application development are doing database administration and application support. While PTI would likely reflect this negatively in a high COOKS and JOAT (Jack Of All Trades) factor, it can also be considered as a positive factor when one realizes that supporting the application on a daily basis enables the developer to do a better job of development. This is due to a more thorough understanding of the daily business practices an end user would encounter.

As many experienced developers would agree, learning the business practices of an organization is often more time consuming and difficult than learning the programming language. Day-to-day support of the application helps developers in their understanding of the application and what it must accomplish for the end user.

- b) The PTI report indicates the Judicial Branch has a substandard "COOKS" number. There are 9 technology department FTEs while the report indicates a "COOKS" number of 4.09. Presumably, this suggests there are too many FTEs.

I would argue that the COOKS concept disfavors people who are more broadly trained in their area of expertise and perform more than the most narrowly defined and specific tasks. For example, if there are three programmers who do programming tasks (.50 FTE), which includes database design/administration (.25 FTE) while also performing application support duties (.25 FTE), the COOKS number will reflect negatively for those 3 people. For programming tasks, the COOKS would reflect something like 1.5 FTE's (3 x .50) needed for programming while there are 3 people doing the work. Then, the COOKS number would reflect 1.25 (3 x .25) needed for database administration when there are 3 people doing the work. Finally, the COOKS number would reflect 1.25 (3 x .25) needed for database administration when there are 3 people doing the work.

This is not a good indicator of the actual work flow and tasks that are ongoing and penalizes one for having staff that are trained and competent in performing both database administration and programming tasks.

The COOKS numbers should be recalculated grouping similar or complementary tasks. Continuing the example from above, if one considers database administration, application development and application support as similar and complementary tasks, the COOKS number could be 3 while the number of people doing the tasks is 3.

- c) The PTI report negatively refers to high “JOAT” (Jack Of All Trades) values. This seems to indicate that an FTE is too many duties and that the FTE is not specialized enough.

I would argue that a medium-high JOAT number is beneficial, when considering the need for cross-training. While each staff member bears primary responsibility for a system or task, our staff members are cross-trained to enable smooth operation of the technology systems in the event of staff turnover or absence.

This can be contrasted with ITD, which has an “acceptable” JOAT value. If one calls ITD for support related to VPN (virtual private network), security, firewall, or real audio there is generally only one person who can answer that call. If that person is out, one can wait a substantial period of time for support.

Other successful consolidation models should be more closely scrutinized and if copied, one should carefully copy only the most successful portions. For example, in South Dakota, which has recently undergone consolidation of some services, the Judicial Branch maintains its own and email servers, development servers, web servers, tier 1 and tier 2 support services, purchasing and application development services. In fact, the web servers which were once maintained by the centralized, Executive Branch technology bureau were moved from there by the Judiciary due to lack of prompt service. The South Dakota judiciary has cooperated with the Executive Branch on services that have made good business sense, including mainframe hosting and wide area network services.

In summary, this is a very new and unproven model for the State of North Dakota. If this type of consolidation effort is to be implemented, it should be done within the Executive Branch and should be done in phases, with the first phase being a pilot project to test the viability of the solution being offered and to verify efficiencies do indeed exist.