INFORMATION SYSTEMS

OVERVIEW

The Information Systems (IS) subcommittee of the GST's Transition Team is charged with reviewing IAFF IS operations and how all components of IS (staff, contractors, hardware, software, security and processes) impact the operations, constitutional authority, and responsibility of the office of the General Secretary-Treasurer (GST). The committee will also make recommendations for compliance and/or improvement.

The IS subcommittee interviewed current and former IAFF employees, contractors, and IS consultants for other non-profit organizations on best practices in addition to having reviewed IS Executive Board Committee reports, IAFF Executive Board minutes, IAFF Executive Board policies, and consultant reports.

FINDINGS

The IAFF IS Division is comprised of two departments: Database Administration and Information Systems. This partial report will focus only on Database Administration. Information Systems will be covered in a future report. The Information Systems Department is broken down further into Web Management as one function and Network & IT as another.

Database Administration

The IAFF has been using iMIS as our management software (AMS) for more than 16 years. This software is used to store, manage, organize, and communicate with members and is widely used by nonprofit organizations.

Personnel

The IAFF has three employee positions in the budget for database administration - one exempt staff member (Director of Database Administration) and two unionized Office Professional Employee International Union (OPEIU) - Local 2[3] staff members.

The IAFF also engages Intuitive Business Concepts (IBC) as a contractor to assist with implementing and upgrading all modules within iMIS. While the IAFF Constitution and By-Laws states that "*the General Secretary-Treasurer shall receive all moneys due the Association from whatsoever source, and shall be the custodian of the official seal and*

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[3] OPIEU Local 2 is the bargaining unit that represents non-exempt employees at the IAFF.

all records, books, papers and property of the Association" (IAFF CBL Article VI, Section 2*)*, the personnel assigned to maintain the very systems used for these responsibilities currently fall under the General President's authority.

Security

As part of the iMIS upgrade in March 2021, because this release of iMIS had newer system requirements, IAFF was able to upgrade the servers on which iMIS is installed. This included important upgrades to the Microsoft Operating system versions, Microsoft SQL server version (2016), and the underlying .Net framework[4]. These later versions of Microsoft include all the latest Microsoft security enhancements and patches.

In an effort to maintain Payment Card Industry Data Security Standard[5] (PCI DSS) compliance and strengthen overall security in iMIS, several security related updates were implemented in this release. Associated changes relate to passwords, encryption, multi-factor authentication, and credit card retention and storage.

IAFF uses the secure Identity Server[6] technology built into Organized Bits Single Sign-On iMIS plug-in solution to ensure the highest level of security and a single program to integrate unlimited secure web sites and microsites.

iMIS user logins and passwords are used for Single Sign-On solutions[7] to ensure security at the user level permeates all additional website offerings while providing for ease of use for the user. Depending on licensing and security roles, users have differing levels of access.

System administrators can enforce password expiration, password reuse, and session timeout requirements to all administrator and non-administrator users separately. These enhanced password security options comply with PCI 3.2 guidelines.

This upgrade also includes a tighter certificate validation policy for secure communication with the iMIS service. The certificate validation policy requires that the certificate is in date, has been issued by a recognized certificate authority and is for the domain by which the service is being accessed. Using a certificate that does not meet this validation policy results in application errors being logged on the server and displayed in the browser.

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[4] .NET is a developer platform made up of tools, programming languages, and libraries for building many different types of applications.

[5] The Payment Card Industry Data Security Standard (PCI DSS) is a set of security standards designed to ensure that ALL companies that accept, process, store or transmit credit card information maintain a secure environment.

[6] Identity Server implements authentication service and policy administration to regulate access to a company's information and applications. These features make it possible to verify that a user is who he says he is, and that the user is authorized to access web or application servers deployed within the enterprise.

[7] Single sign-on (SSO) is a session and user authentication service that permits a user to use one set of login credentials -- for example, a name and password -- to access multiple applications.

There are no concerns regarding the security of the software; however, the subcommittee is concerned that the staff charged with database administration and the security of the very system that performs all functions outlined in this report, which are constitutionally under the GST's authority, are currently under the General President.

The subcommittee sought input from multiple auditing firms who stated that the majority of the organizations for which they provide auditing services, the responsibilities of database administration lie within the finance and membership departments (or their general equivalents). In fact, Renner & Company, the firm contracted to audit the IAFF stated that having the database administration responsibilities under the finance and membership departments, which are responsibilities under the GST, is the most common segregation of database administration that they see with their non-profit organization clients.

User Interface

iMIS is available via the back-office client, the iMIS staff site, other websites such as the IAFF LODD and additional sites used for tracking IAFF training programs and convention credentialing.

The IAFF upgraded to the latest version of iMIS in March of 2021. This newer version will allow the IAFF to access a more secure, modern, user-friendly and intuitive interface and webtools. Additionally, there are several third-party integrations (Figure 1) and plug-ins (Figure 2) that work seamlessly with iMIS.
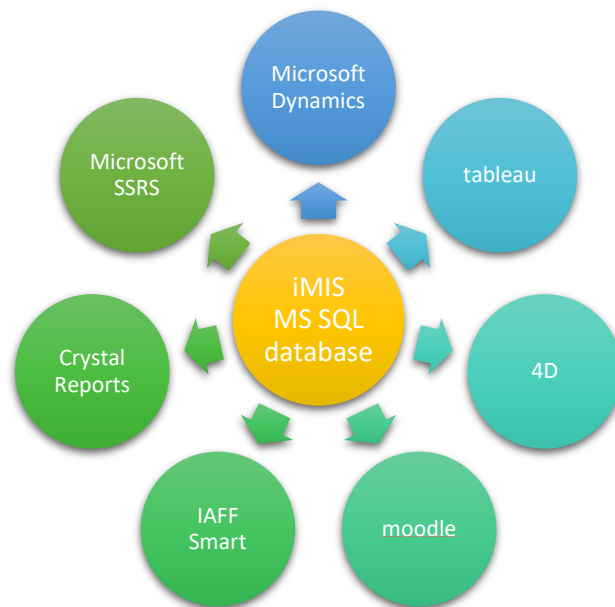

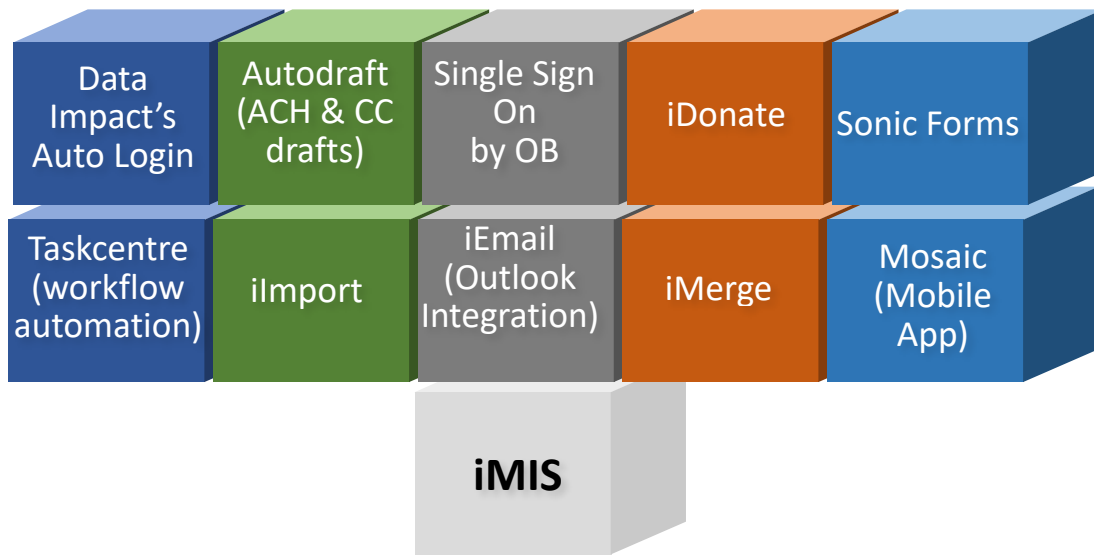**Figure 1: Third-Party Integrations Using iMIS or iMIS Data**

Figure 2: IMIS Plug-ins

Per Capita Dues

While many consider iMIS to be merely a database for storing information on individual members, it is important to understand the role iMIS plays in the accurate collection of per capita dues.

iMIS is responsible for:

- Monthly per capita statements
- Complex calculations that adjust per capita dues statements each month based on adjustments to membership reported by members
    - Adjustments are based on the rate in effect during the dates the adjustments cover (includes retroactive adjustments as needed)
- Managing the online form to sign up, edit, or discontinue automatic bank draft for per capita dues
    - The June 2021 automatic bank draft for per capita included approximately **2500 locals and $2,936,873.42 in dues collected.**

The management of member and affiliate records provides data that is far more involved than simply name, address, and email fields including:

- 51 demographic tables
- 800 demographic fields on the individual level
- 230 demographic fields on the organizational level

iMIS Financials

iMIS provides many crucial elements regarding IAFF financials, serving as the IAFF's subsidiary accounts receivable (AR) ledger and supporting multiple entities, multiple foundation funds, multiple currencies (Canadian and US dollars), and multiple credit card merchant accounts and gateways.

iMIS interfaces the journal transactions to Microsoft Dynamics (accounting software) at the push of a button, preventing duplicate data entry and ensuring accuracy in financial data exchanged.

Additional financial functions:

- Track Emergency Dispute Fund (EDF) and PROP Loans and payments from Locals
- Creation of Invoices for Candidate Physical Abilities Test (CPAT) licenses
- FIREPAC reporting/statistics
- Processing payments for Supplies/Orders (decals/onsite sales of coins/books at events)
- Ability to import data into iMIS (3rd party add-on) – examples: FIREPAC transaction import, importing financial data from Concur (Software used for travel reservations and expense report processes) and ReQlogic (procurement and invoice software).

IAFF Conventions

The role iMIS plays in credentialing, registration and payment processing for IAFF conventions is critical:

- Convention credentials program and convention event registration – online credentials program linked to membership counts and a calculated number of delegates for each convention
- The program adheres to all Constitutional By-laws regarding proxies and delegate selection
- The program also includes number security checks to ensure only specific officer types belonging to Locals in good standing are allowed access to the program
- Once delegates are approved, the officers can then register the delegate and any guests to the event and choose FIREPAC or non-FIREPAC payment/registration options
- iMIS also enables automated emails to the officers and approved delegates along with online/electronic credentials

IAFF Event Management

The IAFF uses iMIS to manage registration and payment processing for almost all IAFF events. iMIS automatically handles different payment methods, merchant accounts and

Canadian versus US dollar currencies. iMIS programming separates FIREPAC funds from operating funds to ensure the IAFF adheres to FEC regulations for PAC contribution collections.

FIREPAC

The IAFF uses an iMIS Add-On called Autodraft developed by enSYNC and is recommended as a best in breed plug-in by IBC to quickly and easily allow members to sign up to donate to FIREPAC with recurring monthly credit card drafts.

IAFF Foundation

The IAFF Foundation uses an iMIS Add-On called iDonate, developed by Computer System Innovations (CSI), and is recommended as a best in breed plug-in by IBC to quickly and easily create branded Disaster Relief donation pages when needed. The Foundation currently uses this page to collect donations for any of the current funds available for donations. The program allots the donations to the proper funds and bank accounts without user intervention.

SMART Integration

Integration from iMIS to SMART for locals using SMART at the local level has been implemented. It is bi-directional and iMIS and SMART share member data including information on member status such as when membership is initiated or if membership status changes.

It was noted that the reconciliation between iMIS and SMART has been problematic, requiring daily intervention by IAFF staff. The current changes related to retired and retired active status continue to be an issue and are corrected almost daily by IAFF staff to ensure proper billing for this category. No dues record is calculated in this instance, and without the intervention and correction by membership staff, this deletion from the local would go unnoticed.

There is no safeguard when it comes to allowing locals to enter effective dates of membership when using SMART. iMIS includes data integrity reports that catch this change and notify IAFF staff who are then able to make appropriate changes when these are identified to ensure proper credits and debits to our locals.

The IAFF engaged DelCor Technology Solutions (DelCor) to conduct a high-level assessment of the organization's current and planned technology environment, initiatives and overall use of technology to serve members and accomplish business goals. A draft report issued by DelCor noted limited system access by IAFF staff. In fact, in a staff survey conducted by DelCor, only 9 out of 112 staff members use SMART in any way.

RECOMMENDATIONS

1. **The General Secretary-Treasurer should continue to use iMIS as the association management system (membership database).** ==In Progress== The IAFF has been using iMIS for more than 16 years. The Assistant to the General Secretary-Treasurer/Comptroller, Director of Membership, Director of Accounting and their staff all report that they are satisfied with using iMIS for their processes and expressed concern with any attempt to replace iMIS with another software. The IAFF upgraded to the latest version of iMIS in March of 2021. This newer version will allow the IAFF to access a more modern, user friendly and intuitive interface and additional webtools. iMIS has several third-party integrations that tie directly to the functionality that the office of the GST relies on:

   - Microsoft SSRS (Report Writer)
   - Crystal Reports
   - Microsoft Dynamics (accounting software)
   - Tableau (business intelligence reporting software)

   iMIS plays a critical role in ensuring the accurate collection of per capita dues including complex calculations that adjust per capita dues statements each month based on adjustments to membership reported by affiliates.

   iMIS serves as the IAFF's subsidiary accounts receivable (AR) ledger and supports multiple entities, multiple foundation funds, multiple currencies (Canadian and US dollars), and multiple credit card merchant accounts and gateways.

   iMIS is the software used for IAFF Convention Credentialing and Convention Event Registration software. With the 56th IAFF Convention just over a year away, deviating from the use of iMIS for Convention purposes would jeopardize the IAFF's ability to ensure a smooth and accurate credentialing and registration process.

2. **Relocate the positions budgeted for the Director of Database Administration, Database Administrator (Grade 8) and Database Assistant (Grade 6), including all budget lines related to the maintenance and management of the database, to the office of the General Secretary-Treasurer.** ==Under Consideration==

   The IAFF Constitution and By-Laws is clear and unambiguous. "*The General Secretary-Treasurer shall receive all moneys due the Association from*

whatsoever source and <u>shall be the custodian of the official seal and all records, books, papers and property of the Association</u>" (IAFF CBL Article VI, Section 2*).* It is impossible to interpret that the GST is the "custodian of all records" if control of the system that stores the records is not under his authority.

It is impossible for the General Secretary-Treasurer to fulfill his constitutional obligation of charge or control of all funds of the Association if the very systems that grant access to these funds are not under the charge of the General Secretary-Treasurer.

<u>The database is our membership list in electronic form.</u> While the employees responsible for working with affiliates to reconcile their membership lists with the IAFF and for receiving all moneys due are in the GST's office, the employees who control access to and who are responsible for implementing changes to the system necessary to protect, secure, and accurately take in and report our membership and financial information are not, which is in direct conflict with IAFF Constitution and By-Laws.

The previous GST (Ed Kelly) made the strong argument that he needed the capability under his authority to control the data going in and coming out of the membership database and for the backend of the accounting systems - and the IAFF Executive Board agreed to enable him to pursue doing that. The subcommittee agrees with the premise that the GST needs that capability under his control. In fact, it is impossible to provide the proper ethical and financial separation, checks and balances, security and the ability to ensure a clean audit going forward without the GST having full control of the database, accounting, and finance applications.

3. **Add a representative from the office of the General Secretary-Treasurer as staff advisor to the IAFF Executive Board Information Systems Committee** <mark>**Under Consideration**</mark>

Below is the charge and jurisdiction for the IAFF Executive Board Information Systems Committee which clearly demonstrates the need for collaboration with the office of the General Secretary-Treasurer as several of these items fall under the GST's constitutional authority.

*The Information and Technology Systems Committee is charged with reviewing, considering and making recommendations **to the General Officers** and the Executive Board concerning organizational policies, programs, and services, relating to access, updating and reporting of organizational information.*

The committee's jurisdiction includes:
- *Review current implementation of a **centralized information database** and network system infrastructure supporting the departmental business practices and the IAFF Web*

- *Evaluate the opportunities for increased communications and accessibility by officers, affiliates, and members to information, including various delivery methods of manuals and forms*
- *Evaluate what data (economic and statistical, contract language, salary and benefit comparisons, etc.) may be __stored in an Information Warehouse__ and how much access to this information affiliates and members will have available*
- ***Recommend what limits (read/query, update, add) are placed on affiliates and members using the IAFF database***
- *Evaluate a possible "Small Locals (less than 100 members) Pilot Program" to analyze digital technologies to support IAFF communications and reporting*
- *Recommend various technological component options to support in person meetings, website training programs, interactive collaboration, and direct broadcast distributions*

4. **Budget for and perform a detailed analysis to determine what functionality and staff utilizing the iMIS back-office client can be moved to the iMIS staff site to better leverage the more modern, user-friendly, and intuitive interface and webtools available following the recent upgrade to the latest version of the software.** <mark>Under Consideration</mark>
The recent upgrade to the iMIS software will allow the IAFF to implement tools that will improve functionality and reduce the time, effort and costs for future upgrades.

5. **Intuitive Business Concepts (IBC) should conduct an information session with the IAFF Executive Board, Trustees, and senior staff so that all are aware of the security, wide utilization across the IAFF and integration with other systems in use by the IAFF.** <mark>In Progress</mark> **– Date to be determined**

Increased awareness on the value and benefit of iMIS will allow for IAFF officers and senior staff to make informed decisions on future investments to ensure the software remains secure, up to date, efficient and effective for IAFF business operations.