

Pulse

Apelon Newsletter

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The deteriorating global economic situation and the change of US administration mean that the health information technology industry has unprecedented opportunity (and likely some funding) to prove it can reduce the United States' healthcare costs. In this issue of Pulse, we offer some observations about the business case for HIT. In our opinion, incremental progress and sustainable economic models are the keys to the kingdom.



Below that, Apelon CMO Rob McClure describes how we apply a continuous incremental progress model to structured vocabulary deployment via the process we call Terminology Asset Management (TAM). Finally, Apelon VP Jack Bowie introduces the Terminology Query Language, a DTS plug-in feature that brings ad hoc query capabilities right to the desktop... without needing a computer programmer.

We look forward to seeing you at several events over the next few months... check out the list on the left. As always, we welcome queries and feedback. Please address comments to pulse@apelon.com or write me directly at scoady@apelon.com.

Regards,

Stephen Coady
President and CEO
APELON

HIT at a Crossroads

Our experience is that incremental practical deployments of healthcare IT are the best course of action.

As an industry, informatics has a reputation for preferring larger, longer term, more comprehensive solutions. Such "big bang" efforts promise significant returns, albeit in the future. The fatal problem is that word "future".

There are impressive savings and improvements potentiated by HIT. But the big returns usually presume practice pattern changes based on persuasive decision support. Short term savings, those likely to be realized from simpler practical deployments, will be smaller. The challenges now include managing expectations and keeping the industry's supporters from losing face as the "how much can be saved", and "how fast for how much" numbers are crunched.

No "killer app" has appeared. It is reasonable to anticipate a cumulative effect, when some critical mass of practical deployment is attained. Then excitement, hungry anticipation, and broad based experimentation will prevail. But we have some considerable distance to go.

Think "simple", "practical", "incremental", and "quantifiable return on investment". Consider two examples:

- Build on what is successful. Providers generally express approval of the EMR systems whose functionality has been characterized as a superlative fax machine. Those are probably the most viable starting points. There are moderate but unambiguous savings from better document handling, one can learn much from how physicians normalize the content of increasing uniformly formatted sheets, and such installations will be amongst the first funded to add more features to such basic plumbing.
- Leverage what has already been captured. Nothing has been thrown away for years. There is a wealth of information to be studied in the data warehouses of most academic medical centers and multi hospital systems. The fastest way to get to analysis of clinical data streams may be to start by helping clean the warehouse's contents so it's easier to write queries to produce retrospective analysis of administrative and managerial data.

The use of data standards to integrate information is critical in these examples. Apelon is deeply involved in international standards development efforts. We are also practical scientists keen to deliver whatever elements of informatics are pertinent to the customer's problem at hand. Please let us know if we may be of help.

Consultants' Corner - Terminology Asset Management



The Apelon Consulting Group, through Apelon's Canadian subsidiary Apelon ULC, has been working with Alberta Health and Wellness (AHW) for the past year on the Alberta Clinical Vocabularies Initiative: Terminology Services. This work has been instrumental in assisting Alberta to understand the scope of work necessary to successfully deliver interoperable terminologies in support of a province-wide shared health record system, known as Netcare. In this project, ACG works closely with AHW team members to identify the required personnel, processes and infrastructure to identify, develop, and maintain terminology. We

call these people and processes Terminology Asset Management (TAM).

Terminology Asset Management functions include:

- Acquire - Develop use cases, evaluate requirements; review, select and obtain available terminologies and associated hardware and software to achieve prioritized enterprise goals.
- Enhance - Translate, localize, and define terminology extensions to fill gaps in external standards and support local enterprise needs.
- Integrate - Define interfaces between selected terminologies and in-use systems to create a unified information architecture.
- Map - Create, acquire, review and deploy inter-terminology mappings to achieve the benefits of data interoperability.
- Subset - Select relevant terminology elements needed for point-of-use terminology deployment to meet focused, user-defined needs.
- Deploy - Make terminology content and services available throughout the enterprise to create terminology-enabled systems.
- Educate - Provide information, training, documentation, and tooling to empower system users.
- Maintain - Implement versioning and update processes to support the latest terminology changes alongside the lifetime electronic medical record.
- Govern - Align and coordinate stakeholders inside and outside the enterprise to manage terminology within the overall enterprise architecture.

Collaborating directly with clients on Terminology Asset Management business processes, as distinct from the application technology required to deliver Terminology Services (TS), is helping our clients apply resources to activities best suited for the skill sets available. TAM activities are, in turn, supported by TS tooling (usually in an editing mode) to create terminology content that run-time TS functionality then serves up to linked applications. Terminology Services functionality can be defined as "Application functionality that provides access to terminology knowledge and content for use in other computer-based systems." Simply put, TAM functions are people and business processes while TS functions are technical application capabilities.

At AHW, TAM personnel (health information management, informatics, computer science, and clinical experts) are responsible for the functions noted above and interact with external terminology authorities as well as work with internal stakeholders including those directly involved in clinical care, technical architects and development teams. The outcome of these activities will be creation of terminology content that is used within the terminology services application to meet the needs of data normalization, terminology content access and general terminology deployment.

For further information on ACG and TAM offerings, contact Apelon's CMO, Dr. Robert McClure at rmcclure@apelon.com.

Product Forum - DTS Terminology Query Language

We are pleased to describe new enhancements to the DTS product suite. Last month, we announced that DTS Version 3.5, a major new version of DTS, will incorporate support for the InterSystems CACHE® high-performance object database. This support is part of a broader partnership between Apelon and InterSystems. For more information, [click here](#). DTS 3.5 will be available in Q1 of 2009.



We also released enhancements to the suite of DTS Editor plug-ins including new versions of the Import Wizard and TableViewer plug-ins and a wizard for the exchange of DTS Subset definitions and addition/deletion of Thesaurus roots. For further information, [click here](#).

In the last issue we described how the Import Wizard plug-in can be used to load external data into the DTS knowledgebase. In this issue, we'll describe the Import Wizard's complement, the Terminology Query Language (TQL) Editor plug-in. TQL is an easy-to-use language for expressing terminology operations using basic DTS Object Model constructs. The TQL Editor plug-in is an interactive "workspace" for writing, editing, and running TQL queries. (Queries can also be run via batch files and API programs.) TQL was originally designed for simple data exports, but has been enhanced to include support for complex queries, data editing, and full saves of local namespaces.

Here are some examples of TQL queries:

Create a file with the name and code of all SNOMED concepts that contain "diabetes:"

```
from ["SNOMED CT"] with concept_name equals "**diabetes**"  
export concept_name, "Code in Source";
```

Create a file as above but with only those "diabetes" concepts lying under the Congenital Disease concept:

```
from ["SNOMED CT"] with concept_name equals "**diabetes**"  
and ancestor equals "Congenital disease (disorder)"  
export concept_name, "Code in Source";
```

Create a file of only those "diabetes" concepts with maps to ICD-9-CM:

```
from ["SNOMED CT"] with concept_name equals "**diabetes**"  
and "SNOMED CT to ICD-9-CM map" exists  
export concept_name, "Code in Source", "SNOMED CT to ICD-9-CM map";
```

Export the contents of local Namespace States to an XML file. This data can subsequently be reloaded using the Import Wizard.

```
from [States] export_namespace;
```

Export the list of States admitted after 1900:

```
from [States] with Admitted>1900  
export concept_name, Abbreviation, Admitted;
```

Delete all the instances of the Properties Admitted and Abbreviation in Namespace States:

```
from [States] delete Admitted, Abbreviation;
```

Set the value of the Status Property on all concepts in the Namespace Chief Complaints:

```
from ["Chief Complaints"] set Status = "Current";
```

For further information, along with the complete BNF of TQL, see the User Guide in the TQL distribution kit. For more information about DTS and available Plug-Ins, please contact [Jack Bowie](#).



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