

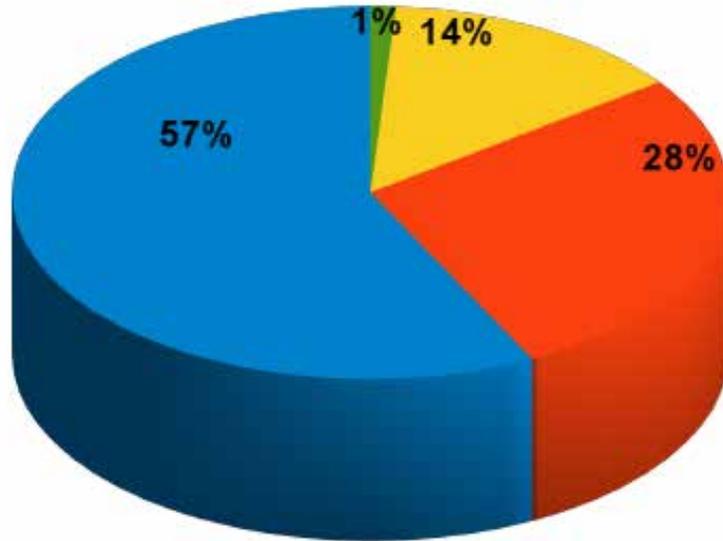


Welcome to the Virtual IMS user group newsletter. The Virtual IMS user group at [www.fundi.com/virtualims](http://www.fundi.com/virtualims) is an independently-operated vendor-neutral site run by and for the IMS user community.

## Virtual IMS user group presentation

The latest webinar from the Virtual IMS user group was entitled, “Best practices: maximizing the use of your IMS data through replication”, and was presented by SQData’s CEO, Scott Quillicy.

Scott is the CEO and founder of SQData, an Addison, TX-based software company that specializes in high-performance Changed Data Capture (CDC) for mainframe and distributed databases. He has over 25 years of database experience and is considered an expert in database replication strategy and deployment. Scott has managed a number of large data integration projects, many of which involved the near-real-time data



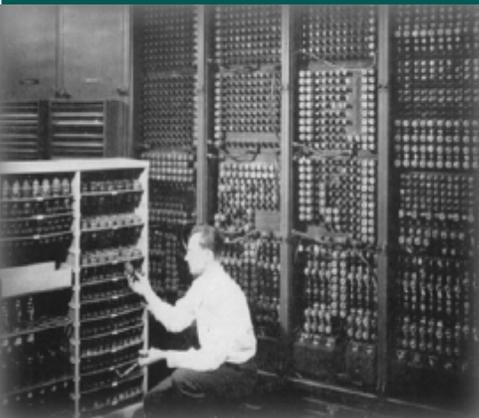
**Figure 1: IMS replication**

capture of IMS databases to a variety of downstream databases/applications. Prior to founding SQData, Scott played a key role in the design and development of IBM’s DB2 Performance Monitor.

Scott started by explaining why sites would want to

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convert from IMS to relational data, listing reasons such as:

- Providing users with a method of querying data outside of IMS
- Business Intelligence / Data Warehousing
- Co-existence with newer applications
- Application migration / replacement
- “We’re moving off the mainframe”.

Scott then ran through How IMS replication is being used today (see Figure 1). 57

percent of sites are using it for data warehousing/BI. 28 percent for event publishing, 14 percent for high availability, and 1 percent for audit/history.

Scott informed the user group that with synchronous replication, multiple sites can be updated within the same transaction scope, and it ensures there is zero data loss. On the downside, transaction latency is much longer, and transactions fail if all the sites are not connected. With asynchronous replication, you get single site updates,

data is captured on the updating site and propagated to other sites, and latency is typically subsecond. On the downside, minimal data loss may occur.

There are four component parts to replication (see Figure 2), and they are source capture, data transport, target apply, and consistency monitoring.

Scott went to explain in some detail considerations for each of these components. He then looked at the role of ETL (Extract, Transform, Load) and CDC (Change Data Capture – see Figure 3.

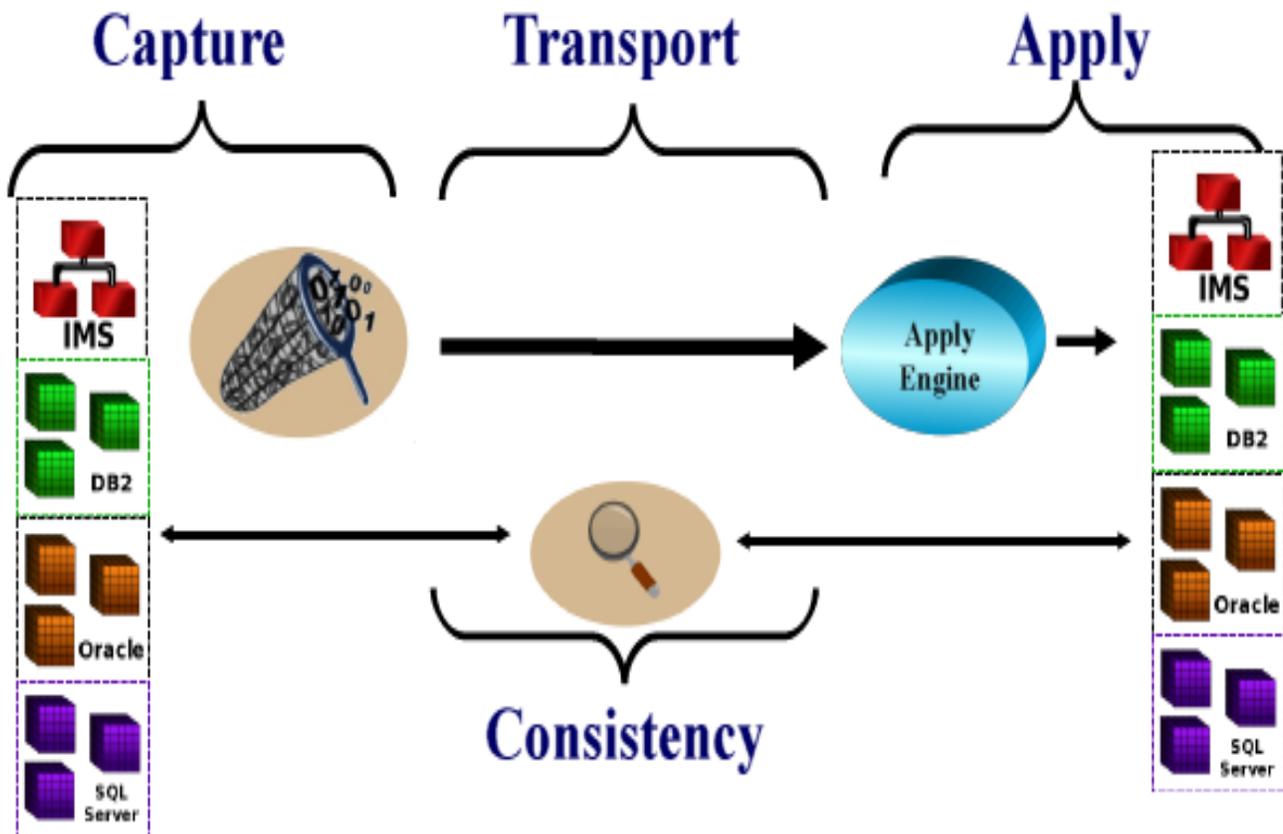
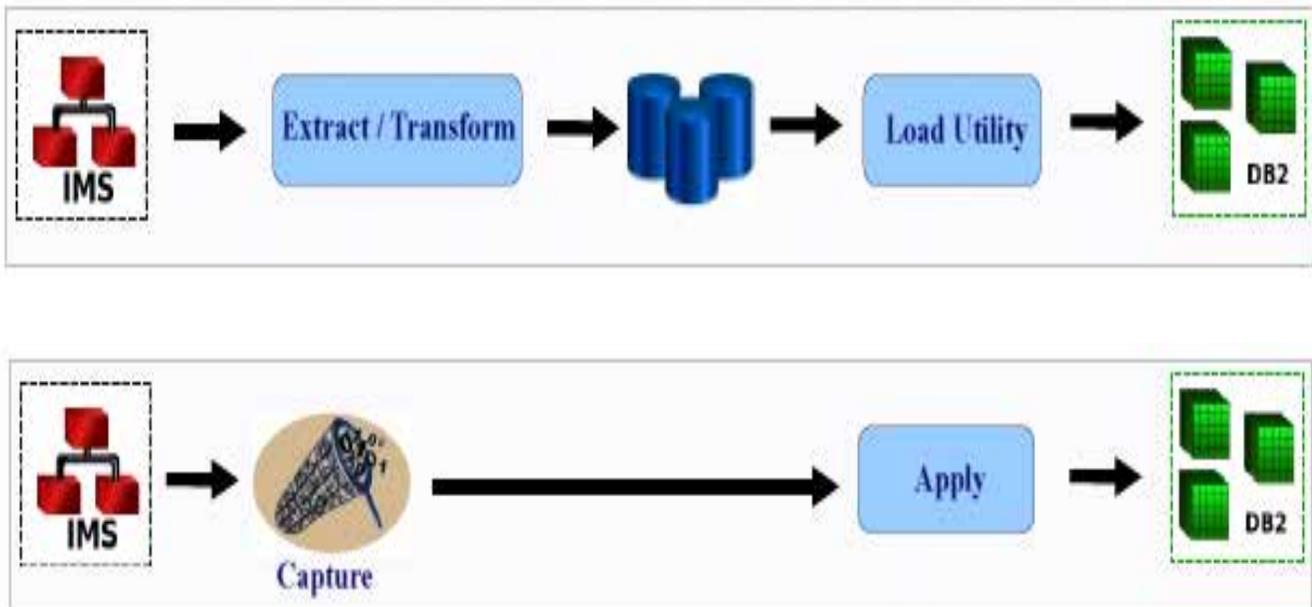


Figure 2: Replication components



**Figure 3: ETL and CDC**

Scott spent some time looking at the different combinations data replication possible, including active/passive, active/active, and active/active with selective routing.

Common data challenges that users face include:

- Invalid data:
  - Non-numeric data in numeric fields
  - Binary zeros in packed fields (or any field)
  - Invalid data in character fields
  - Business rule violation
    - requires assistance from SME
- Dates:
  - Must be decoded / validated if target column is DATE or TIMESTAMP
  - May require knowledge of Y2K implementation
  - Allow extra time for date intensive applications
- Text / comment fields:
  - Usually mapped to VARCHAR
  - Stop mapping at first non-printable, non-control character
- Binary / 'special' fields:
  - Very common in older applications developed in 1970s / 80s
  - Generally require

application-specific translation.

Scott Quillicy explained in some detail how to deal with issues such as: redefined fields; redefined segments (both full and partial); repeating groups / occurs; non-keyed segments; and continuation segments.

A copy of this presentation is available for download from the Virtual IMS user group Web site at [www.fundi.com/virtualims/presentations/BestPracticesReplicationFeb13.pdf](http://www.fundi.com/virtualims/presentations/BestPracticesReplicationFeb13.pdf).

You can see and hear the brief user group meeting by downloading the WMV file from [www.fundi.com/virtualims/presentations/2013-02-05meeting.wmv](http://www.fundi.com/virtualims/presentations/2013-02-05meeting.wmv).

## Meeting dates

- 9 April 2013, James Martin, Fundi Software
- 11 June 2013, Betty Patterson, IMS Chief Architect at IBM, will be previewing IMS 13.

## IMS news

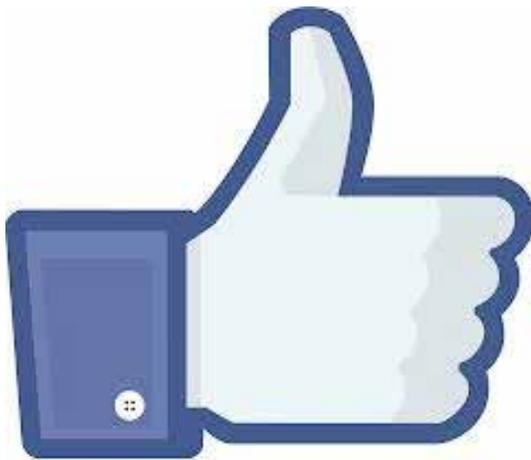
Virtel has announced Virtel for iPad. Mobile users can access the traditional screen interface of IMS, CICS, TSO, and other 3270 applications with iPad ergonomics and BOYD-capable security features. Android tablet support will follow (Q2 2013). More information can be found at [www.virtelweb.com/resources/VIRTEL\\_for\\_iPad.pdf](http://www.virtelweb.com/resources/VIRTEL_for_iPad.pdf).

Compuware has announced that the Workbench File-AID Data Editor now supports

browsing and editing of IMS databases in addition to DB2 and other mainframe file systems. Developers can edit, browse, and understand IMS data constructs from within the same editor they use for other mainframe data types. More information can be found at <http://www.compuware.com/about/release/736437/compuware-unveils-workbench-innovations-that-significantly-boost-developer-productivity>

## Recent IMS articles

*How to Code a Synchronous Program Switch in IMS 13* by Ben Johnson, Dougie Lawson, and Jack Yuan in *IBM Systems Magazine* (March 2013). You can find the article at [http://www.ibmssystemsmag.com/mainframe/administrator/ims/ims\\_program\\_switch/](http://www.ibmssystemsmag.com/mainframe/administrator/ims/ims_program_switch/).



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## About the Virtual IMS user group

The Virtual IMS user group was established as a way for individuals using IBM's IMS hierarchical database and transaction processing systems to exchange information, learn new techniques, and advance their skills with the product.

The Web site at [www.fundi.com/virtualims](http://www.fundi.com/virtualims) provides a central point for coordinating periodic meetings (which contain technically-oriented topics presented in a webinar format), and provides articles, discussions, links, and other resources of interest to IBM IMS practitioners. Anyone with an interest in IMS is welcome to join the Virtual IMS user group and share in the knowledge exchange.

To share ideas, and for further information, contact [trevor@itech-ed.com](mailto:trevor@itech-ed.com).

The Virtual IMS user group is free to its members.