



The SIGIMAGE Newsletter is published by the INTEREX Special Interest Group for IMAGE/SQL Databases.

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SIGIMAGE Mission Statement

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From the Chair...

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As Yogi would say... "it's Deja Vu all over again!"

Seems like I just wrote my column for the SIGIMAGE Newsletter last week, but in checking my calendar, it has been a number of months since we last published our newsletter. A lot has happened since our summer edition. For those who've been napping, I thought I'd try and review some of the highlights.

(Another) New HP Database Lab Manager

In our last installment it was announced that Jim Sartain was undertaking a special opportunity pursue an M.S. degree in Management of Technology with the support of HP. Stepping in to take over the reins was Reynold Schweickhardt. Then, following the conference in Toronto, Reynold was offered (and he accepted) an appointment to head up the Information Management Dept. for the U.S. Congress.

So this time HP management reached into their pool of highly qualified

individuals and tapped Jon Bale to lead their Database Labs. To many

'real old-timers' this name has a familiar ring, but most people today would wonder "now who's this?"

Well, if you pulled-out your dogged-

earned Image Handbook one of the first things you'd notice was a set of

various codes in the IMAGE rootfile that represent the current state of

a database. The early developers of IMAGE left their mark by using their initials as these codes. For example, if the database is OK, the code is 'FW', Fred White's initials. At the top of the list, you'd see the code 'JB'...

Jon was a member of the initial team which developed IMAGE. He has now

returned to a much different IMAGE/SQL and is quickly learning about

all the new features and the issues that we're working. I've talked

with Jon quite a number of times since he took over the Database Lab and recently had the opportunity to meet with him in person. I encourage everyone to take the opportunity to introduce yourself to

Jon and make him feel welcomed. But watch out... if Jon has his video

camera you might find yourself on 'Database T.V.'!

Executive Committee Meets with CSY Management

With the recent changes in CSY, the members of the SIGIMAGE Executive

Committee met with HP's representatives on February 2nd to review CSY's

direction for the HP-3000 along with the status of the various activities related to IMAGE/SQL.

HP Representatives included Harry Sterling, CSY General Manager;

Winston Prather, R&D Section Manager; Jon Bale, Manager of Database

Development; Kriss Rant, Database Product Marketing Manager, Tien-You

Chen, from the Database Lab Team along with Jim Sartain former HP

Database Lab Manager (Emeritus!). In addition to myself, representing

SIGIMAGE were Ken Sletten, Jeanette Nutsford, Ken Nutsford, Wirt Atmar,

Rene Woc, Steve Cooper, Alfredo Rego, Rich Trapp, Stan Sieler and Terry O'Brian.

HP strongly re-iterated their commitment to the HP-3000 and its future

position in HP's product family. It was clear from the discussion that those present were some of the strongest advocates of continued efforts

to expand the HP-3000 community. HP also outlined their current plans

for development activities on IMAGE/SQL. Jon Bale has a separate

article in this newsletter describing some of their priorities. At IPROF, Jon plans on updating our membership on the other activities HP

has in store for IMAGE/SQL users.

Annual SIGIMAGE Enhancement List Ballot

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Membership in SIGIMAGE has its responsibility. And that responsibility

is to let HP know what are the key issues we need their help on to meet

our expanding business needs. Our primary vehicle for achieving this

is by our membership voting on what enhancement requests are the most

important to our individual needs.

Enclosed with this newsletter is the 1996 SIGIMAGE Enhancement Ballot.

Your feedback on this ballot helps both the SIGIMAGE Executive

Committee and HP focus our efforts on those activities which provide

the broadest benefit the most users. So don't hesitate! FAX-back your

ballot TODAY and be among those who guide the future of IMAGE/SQL!

Change in SIGIMAGE Leadership

On a personal note, I recently accepted an exciting opportunity to join

Bradmark Technologies. Although I will continue to be involved with

SIGIMAGE and serve as a member of the Executive Committee, I've elected

to stepdown from my role as Chairman of the organization, effective

March 1st.

Serving as Chairman and representing the needs of the IMAGE community

has certainly been a very rewarding experience. Working together with

the many knowledgeable and dedicated individuals from HP, the vendor and

user communities has truly been a pleasure. Together we've accomplished some of the most exciting enhancements to IMAGE since its

inception. Features like critical item update, bundling of SQL with IMAGE, dynamic dataset expansion, improved data integrity and sorted

sequential access are but a few of the many improvements we've made

to IMAGE by working together these past 5 years.

The SIGIMAGE Executive Committee has unanimously appointed member Ken

Sletten to step-in as Interim Chairman until such a time as elections

can be held. I ask that you extend to Ken the same courtesy and level

of support that was so graciously provided to me.

Jerry Fochtman

Jerry Fochtman

B-Trees and Other News

Jon Bale

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First I'd like to introduce myself. I am the new project manager for database development in the Commercial Systems Division R&D lab. My team is responsible for the IMAGE/SQL, ALLBASE/SQL, and PC API products. Checking my resume, I find that I am not entirely new to databases, having worked on IMAGE/3000 during the 1970s. (I have no personal rec-

ollection of this!) More recently, I have worked for HP in Europe and the U.S. in a variety of software development, support, and management assignments. It's a pleasure to be back in CSY.

During 1995, we had much to say about our plans to provide HP-supported sorted sequential access to TurboIMAGE data through the B-Trees enhancement. Unfortunately, personnel moves and resource limitations conspired against us and prevented us from meeting our stated goal of completing that enhancement during the year. The good news that I want to share with you is that we've gotten back on track with B-Trees, and I'm confident we will be beta testing the feature by the time of the HP World '96 conference in August. Assuming successful testing and the existence of a suitable release vehicle, we should achieve general release of this capability before the end of 1996. I'm a conservative guy, and I hesitate to make iron-clad promises of future events, but we will make every effort to deliver on this one; I'll let you know right away if anything changes.

Please note that the capability being developed will provide B-Tree indices on master dataset keys only, for use in accessing both masters and details. We believe this will meet the needs of a large number of our customers who have been requesting this feature. (If more extensive or sophisticated indexing is required, users may still choose to purchase and use one of the fine third party indexing products. We continue to work with the makers of these products to enable their smooth integration with TurboIMAGE.) We look forward to seeing you at IPROF, where we will cover more details on B-Trees and other projects that are underway in the team.

While I have your attention, I want to mention two other items. First, you will be pleased to know that Kriss Rant, who worked on databases for several years in the lab, is now our product manager in CSY marketing. I have been working with Kriss for the last few months, and I am sure that he will serve HP and our customers very well. Kriss introduces himself in a separate article in this newsletter. Second, you may know that the CSY R&D lab now has a significant presence in India at HP's Bangalore site. We are tapping into the incredible pool of software engineering talent in that country. The database team is well represented at the Bangalore portion of our lab, and has already made substantial contributions to ongoing projects. By the time you read this, Kriss and I will be in Bangalore visiting and working with the team there. I am very enthusiastic about the way this is enabling us to augment my very dedicated and experienced Cupertino team with additional great database talent.

Kriss Rant Leads HP Database Marketing Efforts

*Kriss Rant
Hewlett-Packard Company
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I would like to take this opportunity to introduce myself. My name is Kriss Rant, and I am the HP Product Marketing Manager for IMAGE/SQL, ALLBASE/SQL, and the core MPE/iX products at Hewlett-Packard's Commercial Systems Division.

I have been with HP, working with the HP 3000, now for over 12 years (my entire career). Some of you may remember me from the client/server presentations that I gave on IMAGE/SQL at Interex conferences over the past few years. This is when I worked as an engineer in the Database Lab and learned about how to be "customer focused." Prior to my current position, I spent 6 months in Europe as the product manager responsible for promoting the HP 3000 to the European marketplace.

To learn more about my perspective on HP Databases, visit The 3000 NewsWire Web Site at <http://www.3k.com/seibold>. I can be reached by e-mail at kriss@cup.hp.com.

SIGIMAGE Meeting Minutes

Toronto INTEREX Conference
Thursday, August 17th, 1995

Although the SIGIMAGE meeting conflicted with the MPE Technical Round Table, there was a strong turnout of current and new members.

Chair Jerry Fochtman began the meeting by introducing the other members of the SIGIMAGE Executive Committee who were present. They included Larry Boyd, Denys Beauchemin, Fred White, Jeanette Nutsford and Michael Hornsby.

The first order of business was to circulate the current SIGIMAGE membership list among the attendees, asking those present to update their address information if it was incorrect. Those in attendance who were not currently on the membership list were invited to join.

Annual Election

Next, the annual election for SIGIMAGE Chairperson was conducted. Member Frank Kelly nominated Jerry Fochtman to another term. Denys Beauchemin seconded the nomination and Jerry agreed to serve another year. Receiving no further nominations, the nominations were closed and Jerry was reelected by acclamation.

Review of 1995

Enhancement Priorities

Chair Jerry Fochtman presented the 1995 Top-10 list of SIGIMAGE Enhancements as determined by the members. Included with the list was the recent feedback that had been obtained from European users of IMAGE/SQL through the gracious help of Adager Corporation. This combined list helped show areas of common needs between both geographic regions.

HP Product Update

Jerry then introduced Reynold Schweickhardt, the new HP Database Lab Manager. Reynold is taking over from Jim Sartain, who had been in this role since 1990.

Reynold began his presentation by introducing the lab database team members who were present. This included Glenn Sweeney, Leslie-Anne Bain, Doug Myers, Bharati Desai, Subra Ramesh, Tien-You Chen and Ashish Phillips. Reynold also introduced Kriss Rant, who is the new CSY Marketing Manager responsible for IMAGE/SQL.

The first portion of Reynold's update focused on reiterating HP's policy towards IMAGE/SQL. He indicated that HP will continue its strategy of protecting the customer's investment, providing cost effective business solutions and

maintaining close ties with both customers and SIGIMAGE. Then he provided an update of B-Trees in IMAGE/SQL, which is targeted for BETA testing in the 1st half of 1996.

Upcoming Enhancements to IMAGE/SQL

Reynold then moved into the portion of the meeting that was eagerly awaited by all: what new features HP plans to provide in IMAGE/SQL in the upcoming year.

First, he reviewed the announcement made earlier in the conference whereby HP will be providing a DBQUIESCE feature to support true on-line backup technology. This new IMAGE/SQL feature will allow other products the ability to temporarily suspend users that are in a database without having to close the database. Once the user activity has been suspended, it would be possible to perform certain tasks, such as backing-up the database, and then release the user processes so they can continue. This feature is consistent with HP's strategy of providing 24-hour availability. While this technology offers a number of other possible uses, the initial release will focus on meeting the needs of backup technologies.

Jeanette Nutsford, along with several other users expressed a desire to also use this feature for certain types of application functions. Reynold asked that they help HP better understand their needs so HP could determine if it was feasible to open this facility for user access.

The second new enhancement Reynold announced was that HP would be providing SQL access to both MPE and KSAM files. Reynold indicated that in making the decision, there were two basic areas

where his team needed user-feedback to help them determine the best strategy.

At this time Reynold introduced Leslie-Anne Bain, who would review these areas.

The first item Leslie-Anne presented for discussion involved whether or not HP includes both native mode and compatibility mode KSAM in the feature. Almost immediately there was a lively discussion among the attendees as to the pluses and minuses of each approach. However, the majority of the users present felt that native-mode KSAM was very solid and had much better performance, and as such, would be the long-term solution. This, coupled with the fact that doing both would cost additional time before this feature would be available, swayed the audience. When the vote was taken, "focusing on only KSAM/iX" was clearly the winning choice amount the attendees.

Next, Leslie-Anne reviewed a phased approach to providing the feature. The approach was laid-out in 3 phases.

1. The first phase focused on connectivity to KSAM/iX. This involved establishing the SQL links, providing read-only access (in sorted sequential mode) yet only treat the KSAM file as a non-indexed MPE file.
2. The second phase focused on performance, by registering the KSAM key information in SQL to provide indexed searches.
3. The final phase was to provide full write access.

Leslie-Anne did indicate that there was a possibility that both phases 1 and 2 may be released at the same time. However, she felt it was important that if both were not ready, many people could still benefit from the first phase and this approach gave HP the option of

getting it released and delivered to the users quickly.

The next aspect of the implementation of KSAM with SQL involved the different syntactical approaches used when attaching the KSAM file to the DBE.

1. The first option presented by Leslie-Anne focused on providing consistency with the existing IMAGE/SQL syntax for the ATTACH command. This would have the effect of joining the entire row as a single data element and the user would then need to split this into the necessary individual items.
2. The second option was to borrow from the SQL CREATE TABLE syntax, allowing users to define the individual row items as a part of the attachment.

Practically everyone in the room endorsed this second approach, and several individuals expressed appreciation to Leslie-Anne and HP for soliciting user input.

Update on QUERY

Next, Reynold introduced Randy Roten from HP's Customer Support Operations. Randy's group now has responsibility for supporting QUERY. He reviewed their strategies for supporting QUERY and working together with users and SIGIMAGE along with feedback from HP's response centers to provide the desired features.

Currently Randy's team was working at providing B-Tree access in QUERY to support this upcoming enhancement to IMAGE/SQL. Randy also indicated they would be looking closely at the items from the SIGIMAGE list along with other feedback they received in the upcoming months to determine what they will be working on in the future.

Open Discussion

At this point, there were two outstanding items from the HP Database Round Table that had been researched and to which HP Lab Team members were eager to respond.

The first follow-up item was a concern that with dynamic detail dataset expansion (DDX), the file system would still reserve the maximum space on the disc volume although it had not yet been allocated to the dataset. Tien-You Chen had checked with the lab team that handled the file system and reported that this was not correct. Only when the dataset was expanded would the disc volume free space be consumed.

Next Doug Myers discussed the date/time variable in SQL. During the HP Database Round Table several users requested that HP expose the format of this data so users could manage it within their applications. HP was reluctant first to do this until they had discussed it further. At this time Doug reviewed their thoughts about providing a set of routines for performing the conversion for the users. Several users still felt that HP should expose the actual format so users could maintain the fields directly. Based upon the discussions, this remained an outstanding issue.

During the remainder of the open discussion, a number of topics and other enhancement ideas were discussed. These include:

- Being able to perform an ATTACH without requiring any views.
- Ability to control the number of serial reads performed in data searches
- Error messages from ODBC are not helpful

- Combine SIGALLBASE and SIGIMAGE to form SIGDATABASE.

The meeting concluded with Jerry Fochtman's distribution of the few remaining SIGIMAGE T-shirts to a number of attendees.

Year 2000 and the HP 3000

*Kriss Rant
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Several customers have inquired recently about Hewlett-Packard's plans for moving the HP 3000 into the 21st century. This transition poses some major challenges for both Hewlett-Packard and its customers, due to the way in which computers have historically manipulated and stored dates. HP realizes that this challenge requires immediate attention, and currently has an investigation underway to better understand the scope of the problem for the HP 3000. It is hoped that our customers recognize the urgency of this issue as well.

What follows is a summary of the scope of the investigation. HP plans to discuss the results of this investigation at the IPROF meeting scheduled for March 19-23, 1996 in San Jose, California. Later in the year, HP plans to publicize its plans for helping customers transition to the Year 2000. This includes product plans, services, and information.

The Year 2000 Investigation will discuss the problems caused by people, software, and data using two digits (or a small number of bits) to represent a year. These

problems are referred to as “Year 2000 problems.” Such problems also include date ranges that are constrained to a rapidly approaching maximum (e.g., MPE’s CALENDAR intrinsic, which cannot represent 2028).

Year 2000 problems don’t start on January 1, 2000. They are happening already as customers enter dates in the future (e.g., an expiration date of 6 years from today).

The investigation will identify Year 2000 problems, and for each problem discuss:

- Background.
- Urgency.
- Possible effects of the problem.
- Significance of the effects.
- Existing workarounds to the problem (inside and outside HP).
- Problems caused by workarounds
- Possible solutions

The investigation will discuss Year 2000 problems including:

1. Stored Dates in User Data

1. 1. Databases

1. 1. 1. IMAGE/SQL (including impact on sorted chains)
1. 1. 2. ALLBASE
1. 1. 3. Ingres
1. 1. 4. Oracle
1. 2. KSAM files
1. 3. User data files

2. Stored Dates in Operating System Data

2. 1. File Labels
2. 2. Disk resident data structures
2. 3. Tape resident data structures (e.g., STORE; labelled tapes expiration dates; incremental backups)

3. MPE Intrinsic with Dates

3. 1. ALMANAC
3. 2. CALENDAR
3. 3. DBINFO
3. 4. FFILEINFO
3. 5. FLABELINFO
3. 6. FMTCALENDAR
3. 7. FMTDATE
3. 8. JOBINFO
3. 9. NLFMTCALENDAR
3. 10. POSIX date routines

4. HP-UX Intrinsic with Dates

5. POSIX date routines

6. Languages with Dates

6. 1. COBOL, etc.

7. Date Arithmetic

7. 1. Ambiguity (is 1/1/00 before or after 1/1/99?)
7. 2. Time Spans (1/1/00 - 12/31/99 = 1 or ?)
7. 3. Due Dates (7/7/99 plus 6 months = ?)
7. 4. Sorting Dates (Collating Sequence)
7. 5. Selection based on Dates (where DATE >= 1/1/99)

8. Displayed Dates

8. 1. V/Plus forms files containing 2 digit year fields
8. 2. Terminal display
8. 3. Printer output
8. 4. Fixed record fields
8. 5. Converting internal format to displayable format

9. Software Expiration Dates

10. Date Logic in User Programs

10. 1. Data types
10. 2. Missing Source Code
10. 3. Hard Coded 19xx assumptions
10. 4. Century Digits maintained separately

11. Dates as Names/Identifiers

11. 1. Files named with Date (e.g.: B991231)

12. Shell/CI Commands/Variables With Dates

12. 1. CI: STREAM; DATE=mm/dd/yy

12. 2. CI Dates (HPDATE, etc.)

12. 3. Shell (HP-UX or POSIX): date ... mmddhhmm[yy] ...

In addition to problems, opportunities will be discussed, including methods of achieving both high-speed date calculations and, simultaneously, high-speed conversion to displayable formats.

The investigation will survey applicable standards, including:

- ANSI
- X3.30
- FIPS 4-1
- ISO 8601
- EDI
- U.S. Army

and others as they are found.

The investigation will also survey plans by vendors (MPE, Unix, and other vendors), including (and more):

1. Year 2000 specialists

1. 1. Alydaar Software
1. 2. Data Dimensions
1. 3. Transcentury Data Systems

2. Operating System Vendors

2. 1. HP
 2. 1. 1. HP-UX
 2. 1. 2. MPE/iX
 2. 1. 3. MPE/V
 2. 1. 4. MM3000
2. 2. IBM
2. 3. Sun

3. Accounting software

3. 1. BI-TECH
3. 2. CFS
3. 3. CSTI
3. 4. Chris Schaefer & Co.
3. 5. Collier-Jackson
3. 6. Genesis Total Solutions
3. 7. HP (HP FM)
3. 8. Mitchell Humphrey

- 3. 9. Multiview
- 3. 10. Orion Group
- 3. 11. Ross Systems
- 3. 12. Smith, Dennis & Gaylord
- 3. 13. Speedware
- 4. Application Development / 4GL
 - 4. 1. Cognos
 - 4. 2. IBI (Focus)
- 5. Backup / Archiving
 - 5. 1. Computer Associates
 - 5. 2. ORBiT
 - 5. 3. Taurus
- 6. Batch Job Management
 - 6. 1. Design 3000 Plus, Inc.
 - 6. 2. NSD, Inc.
 - 6. 3. Operations Control Systems
 - 6. 4. Unison
- 7. Databases
 - 7. 1. Bradmark (Superdex)
 - 7. 2. Computer Associates (INGRES)
 - 7. 3. DISC (Omnidex)
 - 7. 4. HP (IMAGE/SQL, ALLBASE)
 - 7. 5. Oracle
- 8. Database Utilities
 - 8. 1. Adager
 - 8. 2. Bradmark
 - 8. 3. Flexibase

Finally, the investigation will discuss potential solutions to the problems found, and recommend a course of action. Note that multiple units within Hewlett-Packard will be encountering Year-2000 problems. They should be able to leverage from the problems and solutions discussed in this investigation, representing a significant savings to Hewlett-Packard as a whole.

The initial focus of the investigation will be on MPE/iX, with attention also given to POSIX and HP-UX.

January 1, 2000, falls on a Saturday ... but most companies will

need more than one weekend to adapt to Year 2000!

SIGIMAGE Agenda, IPROF Conference, March 20-23, 1996

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Thursday, March 21st 1:15pm-4:45pm

- Welcome, Introductions (Ken Sletten, Interim Chairman).
- SIGIMAGE Prioritization Feedback (Ken Sletten).
- Update on IMAGE Product Activities (Jon Bale, Hewlett-Packard).

Friday, March 22nd 3:30pm-7:00pm

- Topics for Open Discussion with the membership at large,

There are a number of issues facing IMAGE's users which warrant member discussion. The actual content of the discussion will focus on those issues most important to the attendees. As such, the attendees have this opportunity to submit topics for discussion. The following is a suggested list of topics:

- Users sharing their experience with IMAGE/SQL
- SQL/DBA implementation issues
- Impact of Windows 95, NT, and Workgroups.
- IMAGE/SQL Lab Team questions for user feedback

- Other topics as provided by conference attendees.

SIGIMAGE Mission Statement

SIGIMAGE's mission is to provide a forum for fostering mutual help and cooperation among its members and by serving as a collective voice, represent and advocate the interests of its members to Hewlett-Packard. SIGIMAGE is dedicated to working with HP in furthering the capabilities of IMAGE for the continuing benefits of all IMAGE users.

Are you a member of SIGIMAGE?

Membership in SIGIMAGE (The INTEREX Special Interest Group for IMAGE/SQL Databases) is free.

You receive this SIGIMAGE Newsletter as a courtesy of INTEREX, the International Association of Hewlett-Packard Computer Users.

To ensure that you and your colleagues enjoy all the benefits of membership, contact INTEREX for further information:

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