

Welcome to the new Virtual IMS *CONNECTION* newsletter. Virtual IMS *CONNECTION* at www.virtualims.com is an independently-operated vendor-neutral site run by and for the IMS user community.

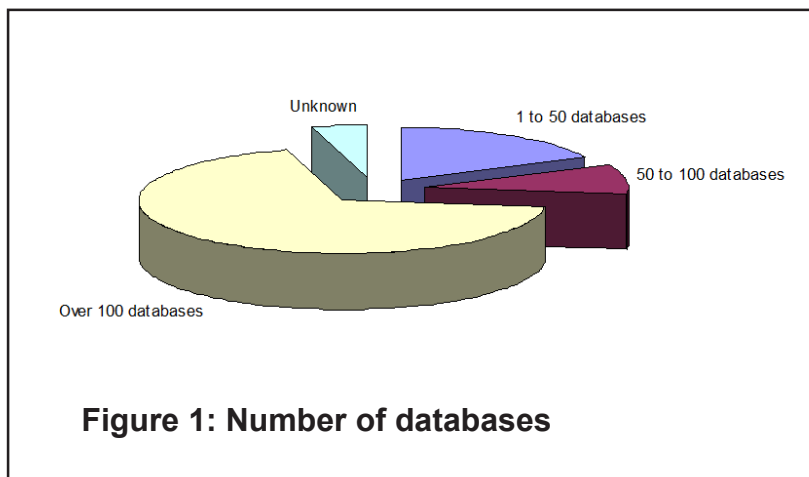
Virtual IMS *CONNECTION* IMS users survey

The Virtual IMS *CONNECTION* user group wanted to know more about how IMS was actually being used by IMS professionals, and so it commissioned a short survey. The survey was carried out from the middle of April until the middle of May 2008. In all there were 45 respondents from 45 different sites representing 38 different organizations in 10 different countries.

The first question was to find out which version of IMS was in use at these different sites. We found that the most commonly used version was Version 9, which is in use at 84.4% of sites in our survey (38 sites). 15 sites were using Version 10 (33.3%), and 14 sites were using Version 8 (31.1%). Four sites claimed to have another version of IMS. One of those sites was still using Version 6.1. Interestingly, three sites (6.6%) had only Version 10 – so they had completed their migration to the latest version. Five sites had only Version 8 (11.1%). IBM will discontinue service for Version 8 on 5th November 2008. Five sites (11.1%) had Versions 8, 9, and 10 running, two (4.4%) have V8 and V9, and four (8.9%) have V9 and V10. Clearly many sites are seeing the advantages offered by the new version of IMS and have migrated to it.

Next we wanted to get some idea of how large the IMS installations in our survey were. Eight sites (17.8%) said they had 1 to 50 databases. Four sites (8.9%) had 50 to 100 databases, and 31 sites (68.9%) had over 100 databases. Two sites answered “unknown”. Clearly the majority of sites surveyed have large IMS installations. The results are shown in Figure 1.

The next question asked what types of database respondents had installed. Simply put, there



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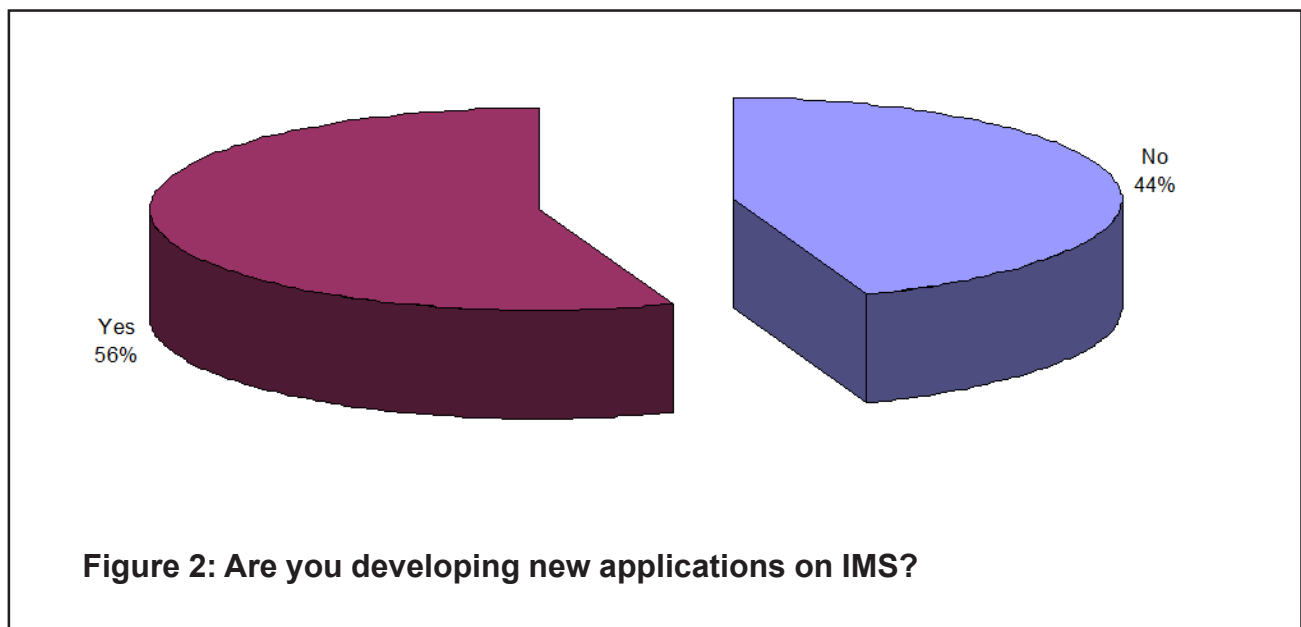
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are three databases associated with IMS DB. These are called "full function", "fast path", and High-Availability Large Databases (HALDBs). With full function databases – the original database type – data is stored in VSAM or OSAM files and can be accessed using HDAM, HIDAM, HSAM, HISAM, and SHISAM access methods. Full-function databases are derived from DL/I databases that were around at the time (1966). There are two types of fast path database – Data Entry DataBases (DEDBs) and Main Storage DataBases (MSDBs). These databases do not have indexes and are stored in VSAM files. HALDBs are the newest (since V7). They are like souped-up very big full-function databases. All 45 respondents had full function databases, 19 (42.2%) had fast path databases, and 14 (31.1%) had HALDB. 10 sites (22.2%) had all three types of database.

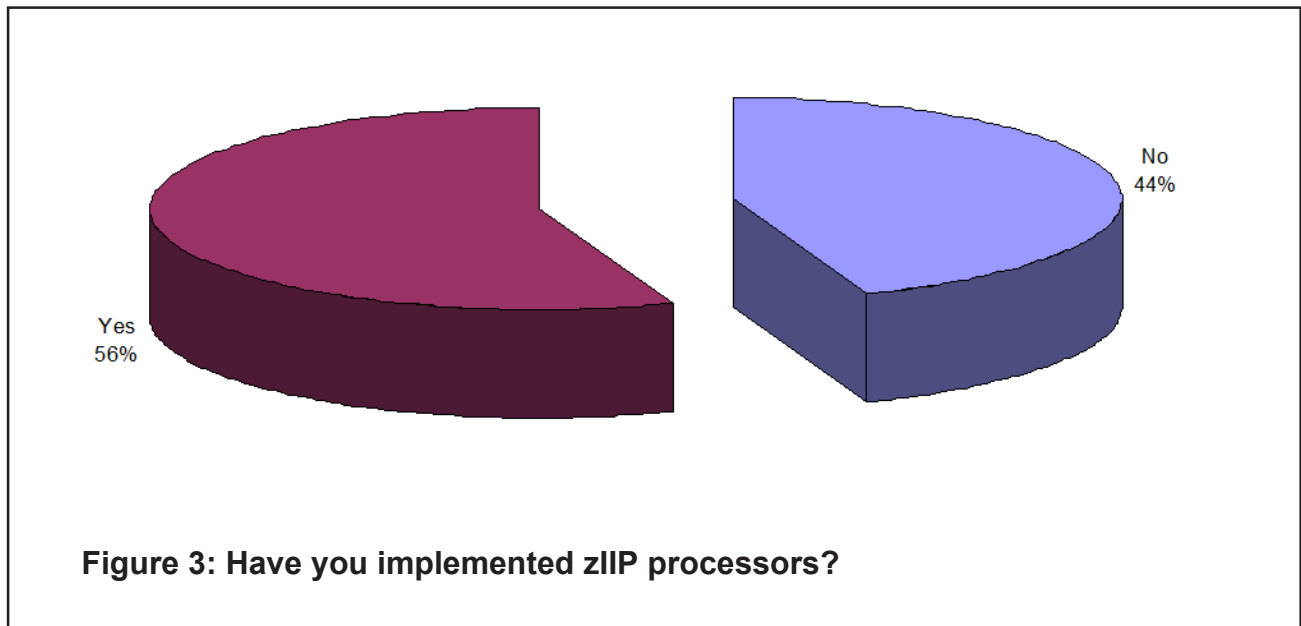
We asked respondents what types of application they ran at their site. We had 37 responses, which could be grouped into the following categories. 15 (40.5%) were running finance-related applications including banking, credit cards, or insurance. Four sites (10.8%) used IMS for testing, two (5.4%) had manufacturing applications, two (5.4%) ran billing applications, and two sites (5.4%) were running health service-related applications. One site was an airline, and 11 sites (29.7%) specified various other applications.

A common supposition is that management does not fully realise the benefits that mainframes and subsystems like IMS can bring. They are happy for IMS to continue running the "older" applications, but anything new might very well be developed on other platforms or using other applications. We asked whether new IMS applications were being developed at respondents' sites. The good news was that more sites (25 – 55.6%) responded "yes" than "no" (20 sites – 44.4%), but the bad news is that it was only just over half saying yes. The results are shown in Figure 2.

IBM has developed specialty engines like zIIP (System z9 Integration Information Processor) and zAAP (System z Application Assist Processor). Basically, any workloads run on these specialty engines do not form part of an organization's contracted mainframe processing capacity because MIPS (Millions of Instructions Per Second) are a way of measuring the



usage of the main General Purpose Processor (GPP). So the use of specialty engines results in a reduction in an organization's Total Cost of Ownership (TCO). As a consequence, not only does the company reduce their software costs, they also get additional processing capacity – which in turn could be used to eliminate or delay the next mainframe upgrade. With new software exploiting these specialty engines, we were interested to see whether organizations had implemented zIIP processors. Of the 45 respondents, 20 (44.4%) said “no” and 25 (55.6%) said “yes”. The results are shown in Figure 3. 16 sites said that they were developing new applications and had implemented zIIP processors.

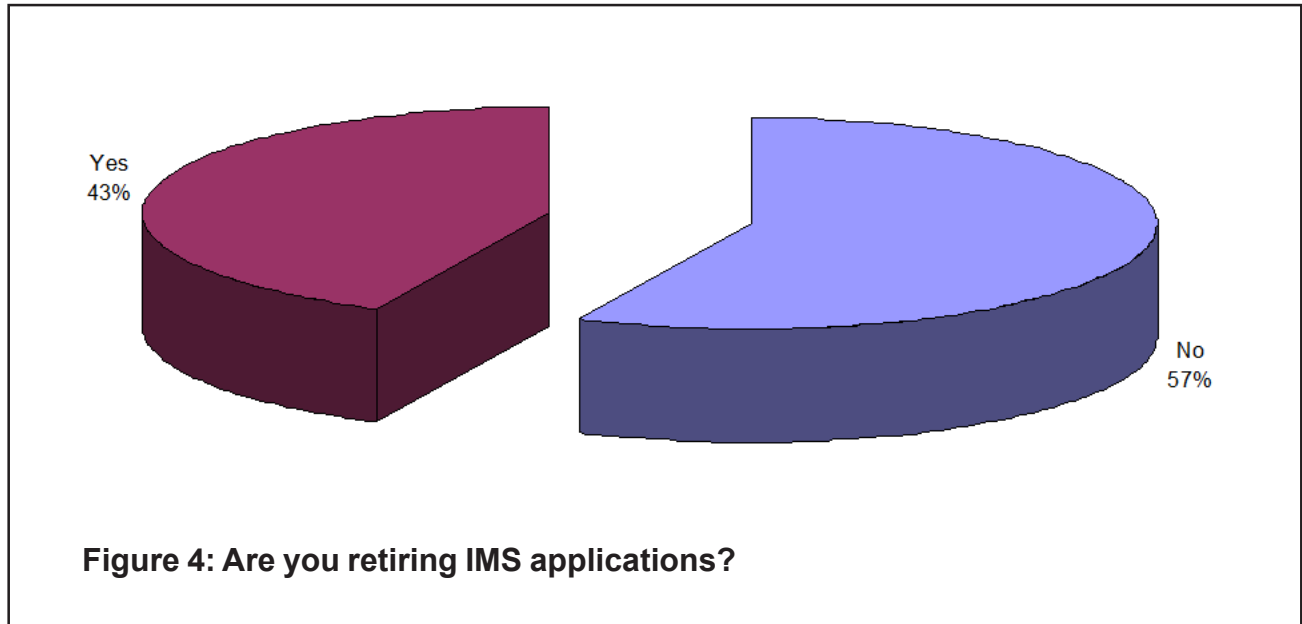


We asked respondents what challenges or concerns they had with IMS. 11 respondents highlighted the problem of ageing staff and the lack of suitably trained staff. Three spoke about the need to convince management that IMS was alive and well and they should be exploiting its new features, with one bemoaning management not seeing the value of mainframes at all. Six sites were looking at various problems with databases – mainly about size and recovery. Two sites saw SOA and Web access as a challenge. One site saw migrating to V10 as a challenge. It may feel more confident reading this survey and seeing how many other sites have already successfully migrated.

Although a few sites saw no future challenges with IMS, these were fairly stable sites and were not looking at any future development. One site told us that SAP was due to take over much of the work currently being performed by IMS.

The survey went on to ask respondents what other databases they ran at their site. Obviously, many sites had more than one other database type installed. 40 sites (88.9%) were running DB2 on z/OS. 26 sites (57.8%) were running DB2 on distributed servers. No-one was running DB2 off a mainframe without also running it on the mainframe. 36 sites (80%) were using Oracle databases, and 33 (73.3%) had SQL Server. 11 sites (24.4%) were using Sybase. Five sites had other databases, including two using Informix and one using Supra.

Looking again at the future for IMS at respondents' sites, we asked whether they had plans to retire IMS applications. Out of 44 respondents, 25 said "no", but a disappointingly high number (19) said "yes". The results are shown in Figure 4.

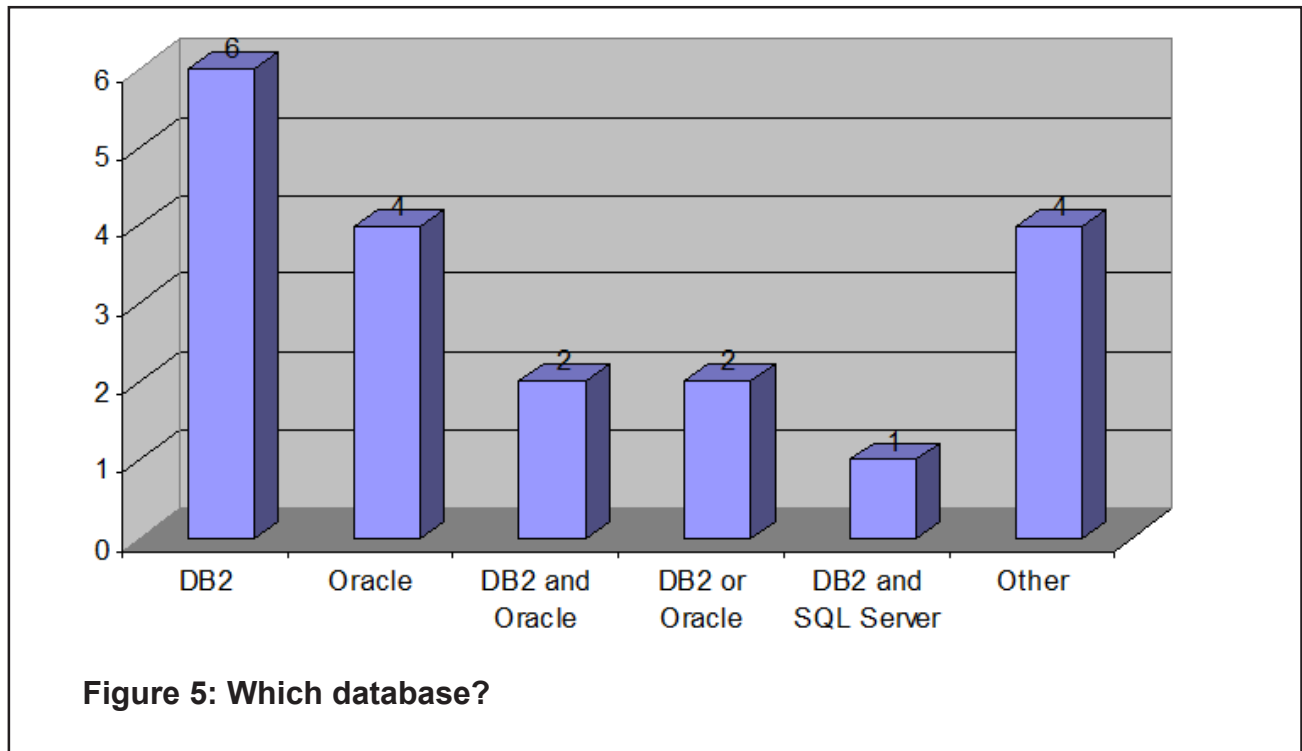


We then went on to ask whether respondents planned to migrate data from IMS to another database. Again, out of 44 respondents 25 said "no", and 19 said "yes". 13 respondents (29.5%) answered "yes" to both this and the previous question.

Worryingly for IBM and software vendors producing IMS-related software, it looks like nearly half the current IMS user base could disappear. Evidence from elsewhere does not suggest that the IMS user base is increasing. SQL Server users don't expect to buy a mainframe and install IMS. So if IMS applications are being retired and data is being migrated to other databases at so many sites, we wanted to know how soon these sites planned to move. Of the 19 sites, five (26.3%) planned to migrate data to other databases in less than a year, nine (47.4%) organizations planned the migration in 1-5 years, and five sites (26.3%) weren't expecting to migrate for at least five years.

We asked which database they were planning to migrate to. Six (31.6%) said DB2, four (21.1%) said Oracle, two sites said DB2 or Oracle, two sites said DB2 and Oracle, one site said DB2 and SQL Server, and four sites said "other" or "unknown". The results are shown in Figure 5.

Web services and Service-Oriented Architecture (SOA) are very important ways for many companies to enable access to their legacy data from distributed systems. We wanted to know how far respondents had gone in the development of SOA at their sites. Interestingly, 17 sites (38.6%) said that System z participates *partly* in Web services with 10 sites (22.7%) saying that System z participates *fully* in Web services. Two sites (4.5%) said that their mainframe will be Web-enabled in the future. But bucking the trend were seven sites (15.9%) that said their mainframe applications did not participate in Web services and they didn't intend to implement mainframe Web services. Eight respondents weren't sure what was



happening at their site. Considering how much press Web services receive and how many PowerPoint presentations there have been extolling the virtues of SOA, it is interesting to see how many sites are rejecting it or have not made it clear to IT staff what is happening next. Just over a third of respondents (34.1%) are in one of these two categories.

The survey results must make bitter-sweet reading for old IMS hands and software vendors including IBM. While on the one hand it is encouraging to see that at over half the sites surveyed new IMS applications are being developed, it is worrying to see that at over 40% of sites IMS applications are being retired and data from IMS is being migrated to other databases, with nearly three-quarters of those sites migrating within five years. It also looks as though management is sometimes unaware of the value of IMS to the organization and there is the perennial problem of finding experienced staff who aren't either currently drawing a pension or getting very close to that age group! The good news for IMS is that there are still plenty of die-hard IMS sites that are embracing SOA and moving forward using the product. The bad news, of course, is that these sites seem to be getting fewer and fewer.

Virtual IMS CONNECTION

While we had IMS professionals taking part in our survey, it seemed a good idea to get their opinions on the Virtual IMS CONNECTION Web site and user group in general.

First we asked whether they had heard of the Virtual IMS CONNECTION user group. 18 respondents (42.9%) said "no" and 24 (57.1%) said "yes", so we still have to reach a lot of IMS professionals. We then asked whether respondents had registered as members of the user group. Of the 24 who knew of us, only 15 had registered. So, please encourage your colleagues to register, and spread the word wherever you can. We then asked whether respondents had joined any of our user group virtual meetings. Of the 15 who were members,

only six had attended a meeting. Our next question was, obviously, to find out why people hadn't attended meetings. We found that seven people had been too busy or had scheduling conflicts, one was in the wrong timezone (Australia), and one said that there hadn't been a meeting since they had joined. We asked what topics respondents would like to see addressed at future meetings and found people are interested in hearing about IMS's future, V10, and the performance of IMS tools versus ISV tools/utilities.

We next asked respondents who had attended a meeting, to rate the overall value of the meeting. We received nine responses: one rated it as most valuable; four said it was somewhat valuable; three were neutral; and one person rated it as less valuable. Calculating averages on a small sample has limited value, but we did it anyway. The mean average is just over half way between neutral and somewhat valuable. The modal average and median are "somewhat valuable".

We went on to ask respondents whether they had seen the Virtual IMS CONNECTION newsletter. Ten people said they had seen it, but 12 people went on to rate it! Of the 10 who had seen the newsletter, eight went on to rate it, with four saying it was somewhat valuable and four saying neutral. We take that to mean there is room for improvement in this newsletter and we are addressing the issue. We did ask what topics respondents would you like to see covered in the newsletter and the only answer was "building services in IMS". We have noted the suggestion.

We next inquired which parts of the Virtual IMS CONNECTION Web site respondents found most useful. One respondent said all, one said discussion forums and knowing other companies who are active in using IMS, one said user experiences with new items in IMS, one said the Webinars, and one said that they were interested in the results of this survey.

This was all very useful feedback. It would have been better if more respondents to the main survey had joined the Virtual IMS CONNECTION user group and used the Web site, and also attended some of the virtual meetings. However, we will take this feedback onboard and hopefully will develop the Web site and user group in the way that members want.

Virtual IMS CONNECTION presentation

The latest webinar from Virtual IMS CONNECTION was entitled "IIMS V10 Installation and Migration Considerations", and was presented by John Butterweck from IBM.

He discussed the installation and packaging changes for IMS Version 10, then looked at migration considerations, and finally provided some hints and tips to aid with a smooth migration.

Amongst other information, John told us that IMS Connect is now packaged as part of the IMS product. Among the good news is the fact there have been no major changes in the installation process since IMS 8.1.

In terms of migration considerations, John gave us a complete checklist including:

- Verify software and hardware requisites – Program Directory

- Migration/Coexistence maintenance
- Review IMS Release Planning guide for this release and any release being skipped
- Review PSP Bucket
- Install new version of IMS
- Possible upgrade to IMS tools and related products – see PSP bucket
- Install z/OS interface modules
- Perform any D/B recoveries that have Extended Error Queue Elements (EEQEs)
- Upgrade RECONs
- System definition
- ACBGEN
- Possible modifications to procedures or jobs
- Re-assemble any user code that accesses IMS control blocks or log records
- Consider changes to execution parms that may affect performance
- Consider changes in IMS commands
- Prepare a fallback plan
- Cold start.

John also said that the following SVCs are used by IMS:

- T2 DFSVC200 (IGCxxx):
 - Downward compatible. Can use the one from the highest level of IMS with previous versions
 - SVC number specified in SYSGEN
 - o SVCNO keyword on IMSCTF macro
 - o DFSPBxxx member
 - Can be updated dynamically for life of the IPL using DFSUSVC0
 - o Requires that no tasks or jobs are currently executing that are using it.
- T4 DSP00MVS (IGC00xxx):
 - Downward compatible. Can use the one from the highest level of IMS with previous versions
 - SVC number specified in SYSGEN

- o SVCNO keyword on IMSCTF macro
- Can be updated dynamically for life of the IPL using DFSUSVC0
 - o Beginning with IMS V9
 - o New copy in ECSA each time.

Among John's hints and tips, he told us there are IVP Dialog Changes with V10, including:

- Options to include RACF added
- Option to include JAVA added
- Dynamic Resource Definition User Interface (DRD)
- IMS Connect
- DB setup for XQUERY
- SPOC Audit Trail (in progress).

Everyone listening to John's presentation must have learned a lot about migrating to IMS 10.

A copy of John's presentation is available for download from the Virtual IMS CONNECTION Web site.

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IBM's IMS newsletter

IBM, as you probably already know, has its own IMS newsletter, which can be accessed via the link on our Web site or by typing <http://www-306.ibm.com/software/data/ims/library/#Newsletters>. The first edition in 2008 contains an article about Virtual IMS CONNECTION.

Virtual IMS CONNECTION News page

The News page on the Web site (<http://www.virtualims.com/news.html>) contains a summary of the latest IMS-related product announcements. So every time a new product than runs with IMS is announced, or there's a new version or release of an existing product, we include a summary on the News page. There's always a link to full announcement if you need further details.

Virtual IMS CONNECTION meeting dates

The following meeting dates have been arranged for the Virtual IMS CONNECTION user group:

- **August 5, 2008 – Dusty Rivers, GT Software, IMS and SOA.**
- *October 7, 2008 – Nick Griffin, BMC Software, Autonomics for your database.*
- *December 2, 2008 – IBM, IMS and Web 2.0.*

All meetings start at 10:30 CDT (3:30 GMT). All members will be e-mailed the Webex URL, access code, and password for each meeting. Members need to log in about five minutes before the meetings starts in order for the Webex connection to complete, and to phone into the freephone number provided so they can join in with the audio component of the meeting.

About Virtual IMS CONNECTION

Virtual IMS CONNECTION is a user group 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.virtualims.com provides a central point for coordinating periodic meetings (which will be technically-oriented topics presented in a webinar format), and will provide articles, discussions, links, and other resources of interest to IBM IMS practitioners. Anyone with an interest in IMS is welcome to join Virtual IMS CONNECTION and share in the knowledge exchange.

To share ideas, and for further information, contact trevor@itech-ed.com.

The Virtual IMS CONNECTION user group is free to its members. Various sponsorship opportunities are available to vendors of IMS-related products. Full details of these opportunities and can be found *here*.