by Jon Inge

BACK to the Future and Leaping AHEAD →

8 Interlinked Trends at Work

Looking back five years to the last Tech Trends article in *Hospitality Upgrade*, it seems at first sight that not much has changed. The goals identified then – gathering as complete a picture of guests and operations as possible, analyzed as flexibly as possible, and accessed from anywhere – are pretty similar to those now, which at least means that we still agree on what we need.

The major differences now are that we have far better tools to speed our way to these goals, and hotel guests are making at least as good use of them as the hoteliers.

Five years ago we already knew and appreciated the value of consolidated data, but assembling it from multiple different systems over various communications links, transforming it into a coherent, useful database and analyzing it were far from simple. Remote access was also less than convenient, at a time when the Palm VII and early Compaq iPaqs were the hot tools for mobile managers.

Now the tools we use have improved out of all recognition. These include the near-universal acceptance of Internet protocol (IP) communications and Web services-based technology as a development platform, middleware that simplifies system integration, more systems with built-in report generators and an equal emphasis on more sophisticated analysis at corporate data warehouses. And mobile devices have come a long, long way from the Palm VII; the combination of cell phones and the Internet has transformed the way travelers look for and exchange information.

As Hilton exec Adam Burke said, the challenge at this point isn't so much the technology; we pretty much have the ability to get systems to talk to each other and to get to their data. What we need is to fulfill the promise of technology, to use it to satisfy our increasingly sophisticated guests' expectations. Given the way those expectations have become so wide-ranging, it also means we need to have the will and the flexibility to consider changing our business models to make new approaches work for everyone.

We're close to a major transformation.

Trends

Eight interlinked trends are at work here.

›› Continuing demand for more complete data.

›› More data analysis to make sense of it and highlight key factors.

›› Web-enabled access to data for new approaches to marketing and booking.

›› Increasingly individualized guest contact.

›› Wider application of revenue management.

›› More centralization of systems for better support and data analysis.

›› More efficient vendor operations.

›› Much more sophisticated guestroom technology.

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7. More efficient vendor operations.

8. Much more sophisticated guestroom technology.

1 Continuing Demand for More Complete Data

Not surprisingly, as everyone's life gets more complex hoteliers continue to want more data, to get a more complete picture of their guests' profiles and activities and of their own operations. Recognizing that the fewer different systems are involved the more accurate the data will be, and the more consistent the data input the more accurate the analysis, demand for comprehensive, enterprise-level systems that cover as many areas of the operation as possible has never been higher.

To meet this demand, newer vendors such as AltiusPAR are introducing wide-coverage systems, and Amadeus has announced plans for a new, all-encompassing hospitality system. Existing PMS vendors also continue to add modules to their core applications (sales and catering, POS, spa, golf, club membership, condo/timeshare) and to expand their multiproperty capabilities.

But best-of-breed system combinations are still attractive to many opera-tions. To boost their integration and overall effectiveness, most vendors of such systems are developing flexible and powerful IP-based integration engines (such as PAR Springer-Miller's Diplomat, MICROS' Opera Xchange Interface and Newmarket's Meeting Broker) to replace the old, restrictive RS-232 serial interface links. With the welcome growth in vendor cooperation, both ad hoc and under the encouragement of the OpenTravel™ Alliance and HTNG initiatives, these are producing much more cohesive sets of applications.

Taking sales and catering (S&C) as an example, many PMS vendors (MICROS-Fidelio, Visual One, Northwind, Hotel Concepts, ResortSuite, etc.) now include a fully-integrated S&C module, and many are very rich, functionally. At the same time, the best-of-breed S&C vendors are developing tighter integration with other systems, to leverage the expertise of each. For example, Kx has partnered with Red Sky IT's Entirety system, and NFS is working with InnQuest's roomMaster PMS. Going a step further, Newmarket has tightened its interfaces with PMS vendors such as HIS and PAR Springer-Miller through an IP-based architecture, has embedded its S&C functionality inside mySAP as an integral part of that system's SFA functions, and is working with IDeaS on group revenue management integration.

These IP interface engines also serve another useful purpose. As well as linking to other hospitality systems, they also potentially open up the databases to ad hoc Internet queries. This is becoming a promising avenue for future marketing and booking approaches; see trend No. 3.

2 More Data Analysis

With the massive amounts of data available on the Internet and generated by hotel systems, hoteliers are focusing even more on extracting usable information from it. Multi-property chains are trying to simplify this task up front by increasing their use of standard systems, so all properties use the same data fields for consistent input. Starwood, for example, used both MICROS' Opera and its own Galaxy as PMS standards in the past, but is now replacing the Opera systems with Galaxy. Opera certainly doesn't lack functionality, but consistency of data input and of interfaces to its central systems is seen as more important.

This trend is also assisting the move to both integrated and centrally hosted systems for many chains. With all information in one database, it's much easier to ensure consistency of data and to analyze cross-property information.

The analysis itself more frequently now relies on visual output to identify trends and exceptions, since there's so much data involved. At the individual hotel level Microsoft Excel continues to be widely used due to sheer familiarity with its filtering and graphics functions, but it's far from ideal. More systems include their own report generators for ad hoc analysis, but many vendors still somewhat blithely recommend that more detailed work can be "easily" done in Crystal Reports or Cognos Powerplay.

These are good tools, but not many individual properties can afford to train their staff on them and to maintain those skills. Better alternatives are the more hospitality focused tools such as Datavision's CVEnterprise (see Figure 1), or Aptech's Execuvue, or the more CRM-oriented Digital Alchemy or Clairvoyix. These combine ease of use with clarity of output and all-important drill-down capabilities to identify the cause of exceptions.

Alternatively, many multiproperty groups now focus centralizing their data analysis through ETL (extract, transform, load) operations. This involves exporting data from the PMS and other on-property systems to a central data warehouse, transforming it into standard data elements and loading it into a central data warehouse. It can then be sorted and analyzed much more comprehensively by corporate specialists.

3 Web-enabled Access to Data

Travelers also focus on data analysis, especially the younger generations, but in their case it's to extract the information they're interested in from the huge variety of options available. They're beginning to use the flexibility of the Internet and new technologies like social networking and "mashups" to cut through traditional advertising and distribution channels, check feedback from their peers and buy just the accommodation and activities that are meaningful to them.

Mashups are Internet sites that combine two or more services, typically a mapping application and one or more data sources, to create unique maps with overlaid location-based information. A great example is Zillow (www.zillow.com), which combines satellite photographs with publicly available property tax and other data to show estimated retail values for each house at and near an address. Type your address into it to see an example of how compelling, attractive and potentially useful this new approach can be.

To become widespread in hospitality the sites will need Internet-query access to the various hotel databases, but its flexibility and appeal are so attractive that it seems an inevitable direction. How about combining a map of resorts along a given stretch of coast, showing room rates for given dates and room types, and with drill-down to floor plans and photos of each room and its view? And then letting the guest choose the specific room she wants? It's only one step beyond choosing your seat on an airline flight. It should also make it easier to revenue manage individual rooms, since the extra worth of prime locations will be easier for the guest to see.

The move toward using natural language queries in search engines

Systems Synergy at Swissôtel

Like most city center hotels, the Swissôtel Chicago works hard to optimize its rates for a variety of market segments and booking channels, and some time ago added **MICROS'** TopLine Profit (TLP) revenue management system to its Opera PMS to help optimize rates.

"It's been a tremendous help," said Anja Fiedler-Colon, area revenue manager for Swissôtel Hotels & Resorts, The Americas. "But it's not the only system we use to guide our revenue management. The data and reporting we get from the **Datavision** Decisions system are also key contributors."

The Swissôtel has used Decisions for several years as a data capture and reporting tool since it takes a daily snapshot of hotel data and statistics and allows for flexible analysis in considerable depth. For example, using data it pulls from the PMS and the ADP payroll system, it outputs financial reports each night on department productivity and margins.

"Its real value for us in revenue management is the context it provides to support TLPs suggested rate settings," said Fiedler-Colon. "Decisions' information guides our periodical adjustments to the rates in TLP, allowing us to go back and review the booking status and pace at any point in the past and helping to clarify what conditions might be different now. We also use TLP's recommendations to guide our rates on the CRS, Internet sites and our Web site, using an extranet for the CRS and through EZYield for the various Internet booking sites.

Fiedler-Colon said, "We reconfigured TLP a year ago when we hired a new revenue manager, and this combination of systems has given us a dramatic improvement in our average rates. It's allowed us to be much more aggressive this year, since we can look at more data, out further into the future, than we could ever do manually."
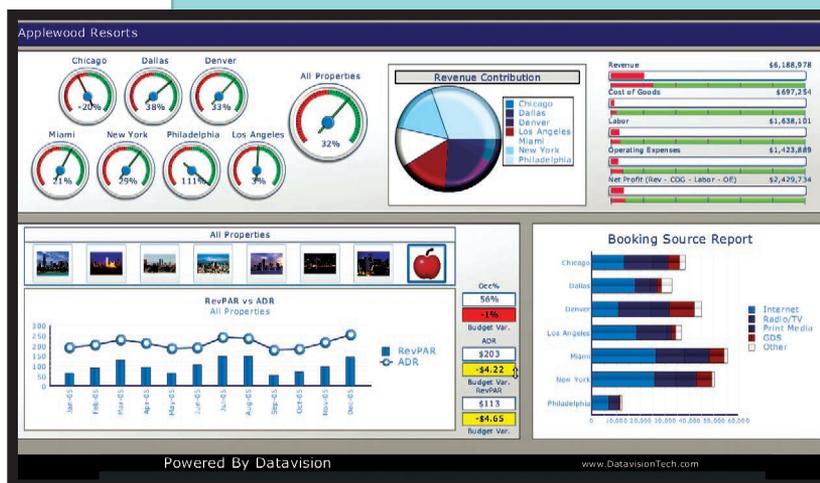

Figure 1: Management dashboard, showing current operating statistics and variation from budgets. This screen also allows managers to see the overall impact of changes in specific department revenue and labor productivity, and allows for drill down to the underlying data. *Courtesy of Datavision Technologies, Inc.*

will also simplify the traveler's booking process significantly. Before long we can expect to ask "find budget hotels within five miles of X and with a pool" (and maybe "with two king bedrooms on the ground floor available from July 14-18"), rather than having to go from screen to screen working through endless pick lists. Google's new online calendar is an example of just how far this type of input has come already.

Add links to online reviews by other travelers such as are posted on TripAdvisor.com, and you have a whole different marketing opportunity – a far more usable site for travelers to find just what they want, faster, more simply and with more relevant information than is available through current channels. All this data already exists in one form or another, and the technology to link it together is achievable. It will require some change in business models, such as charging the site developer a small transaction fee for each access to a hotel's data, and it will take a major chain's backing to get it off the ground, but the possibilities are definitely intriguing.

4 Increased Focus on the Individual Guest

Frequent travelers are already used to having their specific preferences catered to, and CRM will continue to drive that recognition to new levels. But many are also refining their information sources to suit their personal needs and make sure they get what they consider an independent, personalized view of the world. The younger generations especially are mistrustful of the routine channels, which they believe are more interested in promoting what they have to offer than in catering to what the guest wants to buy.

In addition to using mash-up sites when available, they use RSS feeds to subscribe to particular sources that are meaningful to them, including peer-review sites such as TripAdvisor.com and both professional and amateur blogs. To maintain a positive image hotels must track the experiences guests report on these sites, and post responses that show a genuine concern for mis-steps while keeping a sense of reality about guest expectations. Lack of response is often seen as an active negative, as evidence that if a problem does arise during a guest's stay the hotel won't care.

While we're on the personal contact subject, special-offer e-mails sent to guests after they've booked their room can allow hotels to upsell very effectively. They can now be even more powerful if the e-mail includes an interactive PDF document that just requires the guest to click and choose options before replying. The guest is already committed to coming; targeted offers in this format are far less subject to comparison shopping and can be very profitable.

Individual e-mailed follow-up surveys tailored to the guest's specific activities during their past stay are also effective. The guest feels acknowledged, response rates are much higher (30 percent is claimed by Medallia, used by Hilton's guest feedback system) and comments are more reliable, being free from suggestion or interpretation by the hotel staff.

This individual focus also shows up in an increased demand for dynamic packaging on the hotel's Web site. Prepackaged plans are a good starting point, but guests often want to pick their own combinations of services and activities and have them bundled into a single price. As a result, sites are beginning to open up their activities modules to Web booking, combined with guestroom reservations into on-the-fly package pricing.

They're also opening up their sales and catering systems for the online booking of meeting rooms, with user flexibility of meeting room choices, set-up configurations and F&B and audio-visual menu selections. They're still limited to fairly small meetings for now –Starwood's Meetings in a Moment has a 25 attendee limit, for example – but this openness to letting individuals book what they want, without the intervention of a hotel sales manager, is definitely growing.

5 Wider Application of Revenue Management

Internet marketing and search engine optimization (SEO) mean that prospective guests can find a hotel more easily, but they can also find its competitors just as easily and compare rates. In that brief moment when they make a choice, it's critical to make sure that the rates on display are spot-on, high enough for maximum return while still remaining competitive. Effective revenue management is thus more critical than ever, and interest in it is spreading

Looking Back

It's been five years since our last look at technology trends in the hospitality industry. How many of them came to fruition?

Back then the overall trend was "toward the growing availability of access to the right information, at any time, from anywhere, all of which allows a quantum leap in operational efficiency." *No change there; if anything it's even stronger today.*

Four major, linked components were seen as contributing factors:

1 >> **Much improved systems integration to compile truly meaningful information;** *Definitely still going on but still incomplete, though we have better tools now to make it happen, and better vendor cooperation.*

2 >> **More intuitive, hospitality-focused analysis tools;** *These are needed more than ever, though visual data display techniques are improving both ease of use and understanding.*

3 >> **The growing use of PDAs for remote access;** *PDAs themselves have morphed into combination PDA/cellphones which are now used by immensely more people, but management use of them to access property- or guest-specific data hasn't really moved at all.*

4 >> **The rapid adoption of wireless networking and communications;** *No comment needed. Wireless communications are still growing at an amazing rate.*

Beneath this overall picture, an **additional four trends** were becoming apparent:

4 >> **The emergence of viable ASP-oriented PMSs;** *These are now an established alternative, especially for multiproperty groups.*

3 >> **Some improvements in system functionality, though most change is in the way systems interact and are accessed rather than in what they do;** *Very much still the same.*

2 >> **Some vendor consolidations where mergers or acquisitions make sense, and where product functionalities are complementary;** *Not so many mergers have happened since, though there's still a need for a more integrated – ideally, single-supplier – approach to providing hotels with technology.*

1 >> **An increased emphasis on service and support;** *Some minor improvements, but the need for a better approach is even more pressing.*

Figure 2: A channel management dashboard showing the real-time transaction activity between a hotel's CRS, PMS or RMS and its multiple distribution channels. Users can drill down to manage each link as needed. *Courtesy of Hotel Booking Systems Incorporated.*

out into mid-tier segments, as shown by Best Western's adoption of EasyRMS as its chain standard.

The proliferation of distribution channels and specialized Web sites complicates things, of course, and analyzing where guests are finding a hotel's listings and how they make their bookings is essential to positioning it effectively, bringing us back to data analysis again. Given that information, the right rates now need to be posted on the right channels, and so revenue management now includes channel management. It often also incorporates a hotel's competitors' rates posted on each channel when making recommendations.

Quite recently it was important to consider each individual channels costs and commissions when setting rates to be posted there. However, the trend seems to have switched more toward rate parity – calculating a single best available rate (BAR) or rate of the day (ROTD), and posting it everywhere – and then controlling demand by cutting off individual channel inventory rather than adjusting the price.

All of this calls for more sophisticated tools, of course, since the number of channels a revenue manager can control individually is definitely limited. Rate and revenue management tools increasingly allow for multiple channels to be managed through the minimum number of screens (see Figure 2), and there's a trend toward allowing what-if scenarios to be evaluated before implementation to assess their impact ahead of time.

Revenue management is being extended from its guestroom focus to cover more aspects of booking, including function room bookings and guest activities. Both are complex areas with multiple considerations. The former needs to match the number of meeting attendees, requested seating configuration and ancillary revenue from F&B, A-V and recreational activities with the available function rooms and transient guest displacement opportunity costs. The latter has to balance spa/golf members' rights and preferences against the added value of corporate groups and transient guests' bookings.

Determining the best pricing for these variables is complex indeed, but is being addressed. ResortSuite, for example, includes rate management rules for guestrooms and spa, golf, tennis and dining activities, and applies them to booking inquiries both to the property's reservations office and via its Web site. The vendors of dedicated RMS, PMS and S&C vendors are also working toward tighter
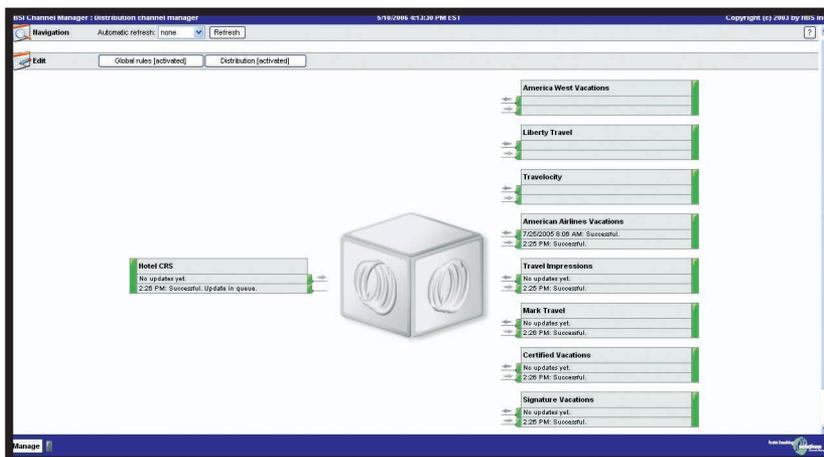
integration of their systems to achieve this level of flexibility and control.

Combine the interest in better revenue management with that for more detailed analysis, and you see a trend toward rate structure optimization. Current systems follow rules to maximize the return from the hotel's rates; future ones will also suggest changes to the rate structure itself that could produce a better return. This applies to the market segments, source codes and guest types in a PMS, and to the function rooms in an S&C context. In the latter case, optimization could reflect back to the user a more efficient combination of rooms and set-up configurations that maximizes the overall return to the property.

6 More Centralization of Systems

Driven by the desire for better support and easier data analysis, centrally hosted systems are now well established as an alternative configuration, especially for multiproperty chains and groups. The data analysis benefits were discussed earlier, but support and, increasingly, security are just as important.

The explosion of interconnected systems at the individual property level is very hard to maintain, especially if you add in all the multiple integrated guestroom options being installed. Centralizing as much as possible allows for a much higher level of technical skill to be applied to performance monitoring and to early problem correction. It also improves reliability by simplifying interfaces between different applications and to external services (e.g., GDS, Internet), and allows for the remote monitoring of quality of service aspects at the properties, for example, knowing when minibars are malfunctioning, flat panel displays are not set up right or when network switches are failing.

Security is also very much a growing concern. Given the recent highly publicized losses of guest profile data it's clear that data needs to be encrypted and kept more secure, and that's more easily done if it's in one central database. User access to it also needs to be controlled more closely than has often been the case. In particular, there's a growing awareness of the value of centrally controlled user security profiles, with a single sign-on into one application authorizing approved and varying levels of access to other systems without needing subsequent sign-in action. This not only makes life simpler for the users, it also ensures that when they leave a company their access to all systems can be cancelled at once.

7 More Efficient Vendor Operations

The adoption by many vendors of a common development architecture (IP communications and Web services) is definitely allowing for faster development, often outsourced to overseas technicians who are also highly skilled on the same platforms. It allows more flexible integration, speeds up implementations through remote control, and is improving support through remote monitoring and diagnostics.

With high-speed communications links to hotels, the need to have an expensive interface technician from each company onsite when a new interface is being installed is disappearing in favor of remote implementation. For example, the complex two-way interface between Newmarket's Delphi S&C system and any full-featured PMS used to need a technician from each vendor to be onsite for three to four days. Thanks to cooperative development between Newmarket and Galaxy, this interface

STARWOOD Sets New Standards

Starwood inherited a considerable mix of systems when it acquired the Westin and Sheraton chains eight years ago: two CRSs, two frequent guest programs, three main PMSs and several minor ones, and so on. It quickly narrowed them down to a few standards and saw clear benefits in operational efficiency and more accurate data, but then decided to take advantage of modern technology to shift to a higher level.

"We took a two-pronged approach," said Mark McBeth, Starwood's vice president of information technology, North America. "At the property level, we're evolving to a single standard PMS, the LightSpeed version of our Galaxy PMS, to ensure consistency of operations and data everywhere. This uses a browser interface to give us much greater flexibility in data presentation and in how users interact with it, helping both new users and experts. Running under Red Hat Linux, it's also very stable and very cost-effective.

McBeth said, "Other advantages of standardization have been a considerable improvement in system and data security through a better use of firewalls, anti-virus software and more robust network architecture. It's also been a great help in our Sarbanes-Oxley compliance efforts, and we now have virtually all of our North American-owned, managed and franchised properties running it. The International properties have started migrating to it, and we should be on a single chain-wide standard by the end of next year.

"The other major change is Project Valhalla, a complete, ground-up development of a new central platform to replace our StarLink CRS. Developed with Hewlett-Packard, this has a Web services layer for maximum flexibility in integrating other systems. These include not only our own LightSpeed PMS and Starwood Preferred Guest program software, but also third-party products and channels such as revenue management, the distribution channels, call center, consumer Web site, and so on. Valhalla is being implemented this year, although it will appear under a new name," said McBeth.

That's almost a shame. It may be a name from the mists of Norse legend, but as a system it looks directly into the future.

Browser-based PMS home screen for a front desk user, showing a portal approach to combining data from several different areas in a single screen.
Courtesy of Starwood Hotels & Resorts Worldwide, Inc.

can now be installed at a Starwood property in one day, remotely, by a technician from either vendor without needing to involve the other.

The cost savings to the client are obvious, the increased labor efficiency is just as valuable for the vendor (one technician can now install three interfaces a week instead of one), and the interface is actually more powerful than before, not simpler. That's the kind of trend we can all appreciate.

8 Guestroom Technology

The explosive growth in guestroom technology is too big and obvious a trend to be ignored in this discussion, but since it was covered at length in the Spring 2006 issue of Hospitality Upgrade, it will not be covered in detail here.

In summary, though, major aspects include the proliferation of flat panel displays everywhere, with hook-ups for guest devices from laptops to iPods, PVPs and digital cameras, and with the beginnings of integration with the Internet, phone, PMS, activities booking, room service and many other systems. Vendors now commonly offer a triple play service combining voice, interactive video and Internet access from a single source, improving services and reducing support issues. Internet bandwidth metering is becoming important as guests begin to download movies and TV programming both from the Internet, and from their own home TVs and recorders via Slingbox.

Unified networks are saving implementations costs, and centralized systems are increasing operational efficiency through more effective minibar restocking, energy management, door lock control, etc. And a tighter focus on professional network management is required to ensure all services aren't lost at once due to a single problem.

Copies of the previous article can be found at www.hospitalityupgrade.com and www.joninge.com.

On the Threshold

André Mendes, chief technology integration officer of PBS, believes that technology changes so fast these days that a long-term strategy no longer means anything, and that there's no longer a difference between strategy and operations. The only way to survive is to build the most flexible platform possible, with systems agile enough to adapt to future technology and demands as and when they arise. Fortunately, IP communications and Web services (including XML interfacing) provide that platform; the key challenge is to keep abreast of changing demands, and to have the management flexibility to adapt operations to take advantage of them.

As noted at the start, many of the trends discussed here have similar goals to those reported five years ago, but now the speed of change has accelerated significantly. New Web-based applications can be created with remarkable speed, and word of the most useful ones spreads very rapidly through the Internet. The potential for change is right there, limited only by the imagination. Hoteliers are challenged to open up and use the technology to meet their new clients' needs.

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HEAVEN OR HELL?
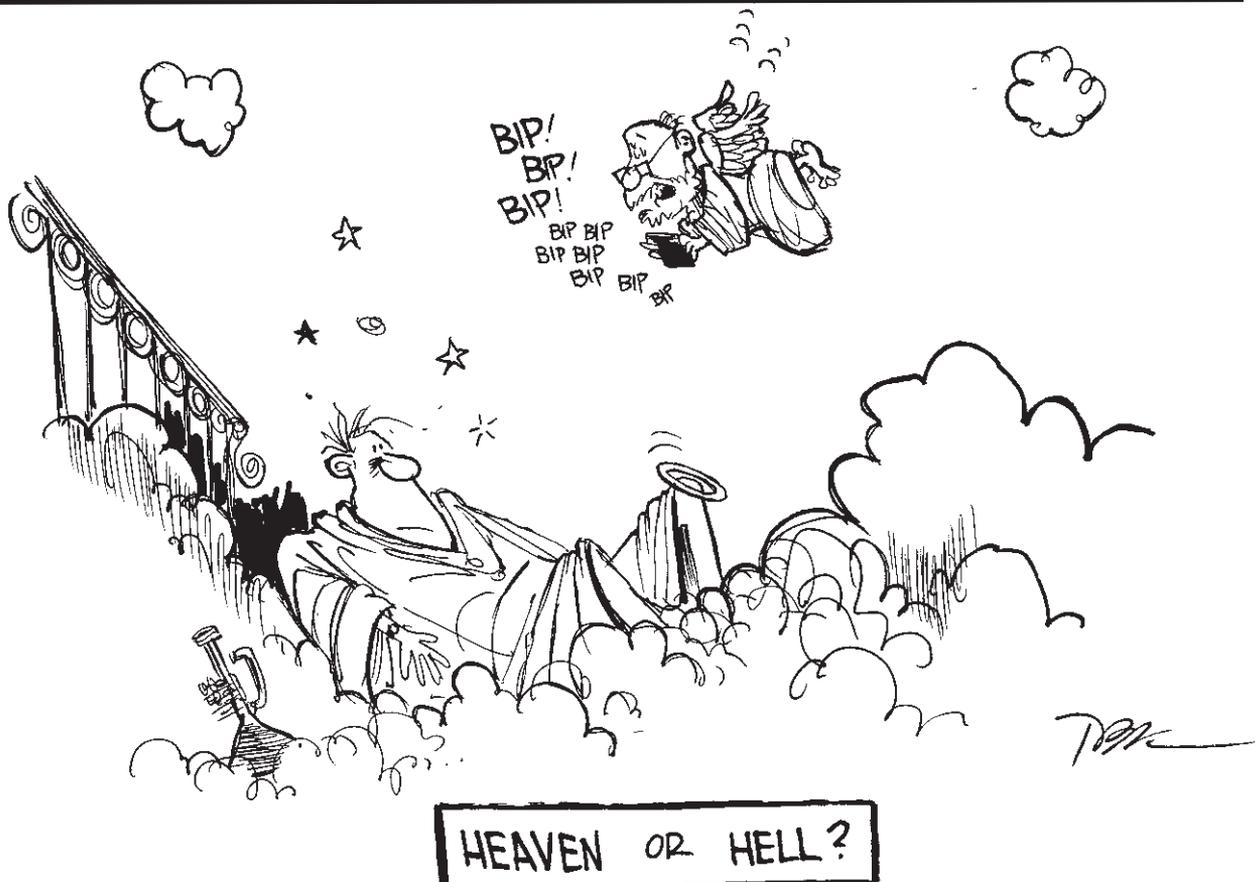
"No, no, no. This isn't Cloud 9. Your Afterlife confirmation number is 9-3487-00030 which is SUPPOSED to put you on Cloud 9-0034, Level 4N, Layer 1772 (b). As usual we're going to blame this one on the new software."