

SAFER[®] WORLD

From Our President Matthew S. Collier



The Holiday Season is fast-approaching, and I can hardly believe how fast the time has passed. We have seen so much change here at SAFER over the past 12 months, the past year seems like a blur. I'm happy to say that the change is the result of enormous progress, and draconian steps forward in almost every respect.

As you will see in this issue, we are growing, adding new people, adding new technology, and delving into markets we have not previously pursued. Our growth is being fueled by the need for our special blend of existing and evolving technology, and the expertise we possess as a leading-edge high technology/software

company.

As those of you who have climbed to the 9.0 version summit with SAFER Real-Time and SAFER STAR have already seen, the view is magnificent. We have leveraged the latest in GIS technology, and pressed forward significantly with our new user interface and our patented "Advanced Back Calculation" (ABC) capabilities.

In addition, SAFER TRACE 9.0 will take quantum leaps forward in the areas of particulate modeling (more about this in our next newsletter), and in helping our customers model BLEVES more quickly. The program will automatically estimate thermodynamic properties - thus making it possible to easily model scenarios involving BLEVES. Of course these capabilities will reach SAFER Real-Time within the next year.

The new TRACE 9.0 platform

is currently in its final phases of development, and will begin distribution in approximately the next 4 weeks. Also included in our SAFER TRACE 9.0 upgrade will be the momentous jump to the latest in GIS technology, as well as a wonderfully crafted user-friendly upgrade of the "Consequence Analysis" (or "Population Analysis") module of SAFER TRACE.

Adding still further to these impressive advances in technology, we are creating an HTML output capability which will replace the remote user concept, and our new odor modeling capability (SAFER Scentry) will begin final testing in the 2nd quarter of 2004.

We are in a very exciting time at SAFER, and I hope you enjoy the ride!

Please feel free to contact Matt at mcollier@safersystem.com, or at 805 383-9711, ext. 115.



Happy Holidays From
SAFER Systems!!



Conundrum...

Joe loves to create confusion. One Tuesday he sent an e-mail memo to his secretary that said, "I'll be back in the office three days before one week after the day after tomorrow."

When would he be back?

Answer on page 4

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The Province of Alberta, Canada is Getting SAFER... By Bob Gerow

...SAFER STAR that is. As part of their commitment to public safety and emergency management, the Emergency Services Departments in the cities of Calgary and Edmonton are the first government-based agencies in Canada to acquire SAFER STAR to improve their ability to respond to HAZMAT emergencies.

Using GIS mapping, database and global positioning system (GPS) technology, as well as portable remote weather and gas sensor monitoring capabilities, the SAFER STAR system allows emergency responders to accurately model the effects of accidental or intentional hazardous material spills, releases, and fires or potential explosions, at any location throughout the coverage area.

The Alberta project was funded under a

Canadian Federal - Alberta Provincial grant to enhance community response capability against Chemical, Biological, Radiological and Nuclear (CBRN) incidents.

One of the unique benefits generated by this project is the opportunity for any Alberta municipality to "buy-in" to the system. Any community in the province can acquire a client copy of the system at a significant savings (compared to acquiring an independent system) to allow them to actively track hazardous releases and create a faster, more efficient source of information for key decision makers during hazardous material incidents.

SAFER STAR is in use by all the class one railroads in North America, as well as the Ports of Los Angeles, Long Beach

and LeHavre, France. In fact, the Civil Defense agencies of Luxembourg and Singapore have also adopted the software to provide nationwide emergency response coverage for each of those entire countries.

Since the implementation of the Edmonton / Calgary project, the province's third largest community, Strathcona County, has taken advantage of the client copy opportunity and ordered a system for their region with the support of a grant from Alberta Environment. Other Provincial and Canadian Federal Agencies have also started investigating how they might leverage this innovative approach to acquire such a powerful and effective response tool.

Indeed, the province of Alberta is getting SAFER!

Please contact Bob Gerow at either bgerow@safersystem.com or 1-780-483-7879.

Advancing The Science For Rate Estimation

By Ernie Gilbert

Five years ago, the most difficult part of the first few moments of a loss of containment event, was estimating the release rate. Imagine a first responder standing next to a process unit that is engulfed in a cloud. He has no idea what the failure might be. As he stands helpless and clueless, he is asked, "How much material is being released?"

Over the years, a number of ideas have been implemented to help speed and improve the initial assessment of an emergency situation. One idea was SAFER'S pre-calculated scenario. Using this concept, an engineer would review the process area and provide a limited selection of possible events. During the event, the SAFER Real-Time operator chose an event to get started and then iteratively evolved the simulation to what was actually occurring. The pre-calculated scenario is now used widely today at most SAFER sites.

Another plant's idea involved a special set of menu path decisions regarding hole size. They built part of the event as an emergency scenario, and then the operator picked the size of the hole. The hole size was provided by the responders. They developed a steam emission system where they controlled the hole size allowing them to practice observing what several different hole sizes looked like during an emission.

The most advanced method now employed by SAFER software involves measuring actual concentrations in the field during the event, and then forcing the dispersion model to converge on the actual concentrations.

The premise is to tighten up the differences between the mathematical side of the model and the actual measurements made. The technology is referred to as Advanced Back Calculation or **ABC**.

The pioneer in this developmental effort is General Electric Plastics in Bergen Op Zoom, Netherlands. Peter Groffen, PSM Leader for Lexan, grasped the importance of improving the estimate of a release rate. His comment at last year's SAFER European User Meeting was that we now had the "*Real*" Real-Time." It took two years to design and implement the ABC system for the plant site. Interestingly, the spin-offs application from this job were the Geographical Information System (GIS) usage, and the creation of the emergency response vehicle, GOLF 20. This is a utility vehicle that will monitor chemicals of concern at GE, and radio the data back to the SAFER Real-Time system.

In July, 2003, we finished our first USA-based ABC installation at ATOFINA in Port Arthur, Texas. This system uses commercially available radio-based portable gas monitors to report field concentrations back to the SAFER Real-Time system. They currently have six portable units which can be quickly deployed in the path of the event. For both GE and ATOFINA, the combination of graphically illustrating gas sensors on a detailed map, while simultaneously watching a plume model develop - is both powerful and impressive!

The software has been a major stepping-

stone in our research program. Dr. Shahryar Khajehnajafi, Research and Development Manager at SAFER, whose foresight has been instrumental in the implementation of ABC, recently commented "SAFER is only beginning to see the potential of ABC." He is already seeing extended uses of the technology and how the operator will interact with the program.

If you are a SAFER support customer who had the early version of Back Calculation, you will be receiving the ABC program as part of your upgrade. We have an excellent paper explaining ABC that you can obtain by contacting Renee at SAFER's California Office. Customers in Europe who are interested in ABC should contact Dave Lorkin in our London office. We invite you to call us with your particular situation and look at new and creative methods that your site might benefit from this technology.

The timely development of ABC has dramatically improved the speed and accuracy of release rate estimation.

You may contact Ernie Gilbert at egilbert@safersystem.com or by phone at 805-383-9711 ext. 129.

**"You cannot do a kindness too soon because you never know how soon it will be too late."
- Ralph Waldo Emerson (1803 - 1882)**

SAFER Welcomes Two New Members To Our Family!

By Carina Eddy



Introducing Bob Gerow

Bob Gerow is our new Regional Business Manager for the Americas. He makes

his home in Edmonton, Alberta, Canada with his wife, Sheryl, and kids, Solange and Denis. Born in Timmins Ontario, Bob is a graduate Mining Engineering Technologist and is trilingual (English, French and Spanish). He has 25+ years of experience in EH&S and ER in Canada and abroad, and more than 10 years as a SAFER Real-Time system user at Sherritt in Alberta, Canada.

He joined SAFER in 2003. In addition to marketing and sales, Bob brings his unique ER and SAFER background into play during system implementation, user training, and detailed

reviews of SAFER installations—including providing recommendations on system integration with site emergency plans.

SAFER Welcomes Chris Goodrich

Chris Goodrich joined SAFER as a Field Service Engineer in April 2003. Prior to his employment with SAFER,



Chris held various Senior Technician/Engineering positions with industry leading medical, laser imaging, and Military Defense contract manufacturers.

Chris was raised in Boise, ID and graduated from ITT with an Associate's

Degree in Engineering. He has made southern California his home since 1986. Chris and his wife, Josefina, have a 13 year old son, Christopher. Chris believes that success in business is to produce a quality SAFER product.

We are excited to have both Bob and Chris on board the SAFER Team!



A Word From Across the Atlantic

By David Lorkin

As I write this piece, the sun is shining and the British fall is upon us. I sincerely hope that all of you have had a very pleasant year and that you are reading this issue of *SAFER WORLD* fully ready for the holidays ahead!

It is hard to ignore the somewhat depressing fact that, this year, we have seen the spectre of war, faced the continued threat of terrorism, and witnessed the latest deadly viral infection come, and, for the moment at least, go. Uncertainty seems to permeate everywhere, and never has the need to plan and prepare for emergencies been greater. Companies and government agencies alike have been implementing strategies knowing, in the event of an incident, that

“Knowledge reduces chaos”

SAFER Systems’ small but significant contribution to this overall effort has been to continue rolling out the latest powerful versions of the *SAFER Real-Time* and *SAFER STAR* software to our customers, and to push on behind the scenes with

further product developments and even more useful enhancements. In terms of chemical emergency response and protecting lives, property and the environment, SAFER Systems’ role is more important than ever. The 25+ years of our real and practical experience is proving invaluable with the heavy demands of today’s world.

Aside from the successful and on-going implementation of Version 9.0, 2003 for the London office has so far seen the successful addition of two more *SAFER STAR* users - the Singapore Civil Defence Force and the City and Port of Le Havre, France - and the first *SAFER Real-Time* installation at a major chemical site in Japan. These milestones illustrate the depth and breadth of the *SAFER WORLD*.

Last, but not least, please feel free to contact the London office for any questions or issues that you may have about your SAFER software. It is always a pleasure to hear from customers. To remind you, we can be reached by e-mail

at dlorkin@safersystem.com or by telephone at +44 20 8695 0678

Good luck and be safe!

King of the Jungle???

It is the female lion who does more than 90 percent of the hunting, while the male is afraid to risk his life, or simply prefers to rest.



The Lighter Side of SAFER

By John Tobo

In October 2001, I had the pleasure of spending a day in the Batu cave located near the city of Kuala Lumpur, Malaysia with my boss, Ernie Gilbert.

We were warned of the monkeys by the cab driver when we first arrived and I remember thinking “this is going to be an interesting day.”

Upon arrival, we were approached by a lady selling feed for the pigeons and monkeys. I wasn’t interested, but Ernie certainly was. He felt that feeding the monkeys would make for a great picture, while I wondered about the rationale behind the idea. We ran into the monkeys at the base of the cave. Ernie was initially timid, but quickly gained confidence. Seeing how easy it was, I decided to try it too. Their hands were soft, but extremely quick at taking the food.

After taking some pictures, we ran into “HER,” a female monkey who had a baby hanging from her chest. She was beautiful and small. As she held onto the baby, she was the epitome of a mother’s love. That sight was picture-perfect.

Now, while Ernie is a brilliant Software Engineer, he is not very bright when it comes to monkeys. For that matter, neither am I. Fortunately for me, however, Ernie decided to take the lead. Ernie pulled out the bag of peanuts and shared them with “HER.” She wasn’t satisfied with just one, so she reached for the entire bag! Ernie stood up into a pose that looked remarkably like the Statue of Liberty. The monkey climbed up him like she was King Kong and he was the Empire State Building. Ernie started yelling “WHOA WHOA JOHN! JOHN! JOHN!”. However, I was too busy running away to pay attention!! I ran about 12 steps away from him when I turned to see what was happening. The monkey had a “Kung-Fu” grip on the bag of peanuts, but Ernie was holding his own! After a mighty struggle, my boss was able to overpower the ferocious beast (about a foot tall). He was greeted by laughter from all directions, the loudest coming from me!

He then did something that I felt was very brave. He asked me to take a picture of him with the monkey climbing on him. I was able to get a great picture.

Of course the monkey tried to get the bag again. And again they struggled mightily! Once again, Ernie was surrounded by laughter. It was truly a day that I will never forget. And below is the fruit of his labor.....



For more information about Monkeys in Malaysia, or about SAFER related issues, please contact John Tobo at jtobo@safersystem.com or 805-383-9711 ext 123.

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Note: Please direct any comments regarding the SAFER World to Ms. Carina Eddy @ (805) 383-9711 extension #117 or E-mail: ceddy@safersystem.com. We appreciate your comments.

The Answer To The Conundrum Is

Monday of the following week.

Trivia Time

Smileys are tiny pictures made from ordinary ASCII characters that are meant to be looked at with the head tilted to the left.

Smileys came about when e-mail correspondents felt the need to convey emotional content such as sarcasm, laughter and other feelings as part of their messages. Without smileys, simple statements could easily be misinterpreted:

You're an idiot! :-)

Sometime during 1981, Scott Fahlman, who is now a Principle Research Scientist in the School of Computer Science at Carnegie Mellon University, devised a scheme for encoding and conveying one's feelings as small text "glyphs" to overcome this frustration.

Scott was the first to use smileys in electronic mail and in posts to BBS message boards and Internet newsgroups, as well as in personal e-mail.

:-) - Humor :-)
(-: - Masking theatrical comments
:-T - Keeping a straight face (tight-lipped)
:-D - Said with a smile
:-> - Alternate happy face
:-) :-) :-) - Loud guffaw
:*) - Clowning around
:-? - Licking lips

%-} - Silly
:/) - Not funny
:-" - Pursing lips
:-r - Bleahhh (sticking tongue out)
:-f - Smirks
:-p - Smirks
:-1 - Smirks
:-, - Smirks
:-| - Disgusted
:-J - Tongue-in-cheek comments
:-! - Foot in mouth
:-\$ - Put your money where your mouth is
:-D - Talks too much
:-I - Chewing on bone
%&\$%& - You know what that means..
:-P - Shouting
:-y - Shouting
:-o - Shouting
:-(- - Unhappy
:-c - Real unhappy
(:-& - Anger
(:^(- Broken nose
(:< - Blabber mouth
?-(- Black eye
%-) - Broken glasses
:-b - Tongue stuck out
:-p - Left-handed tongue stuck out
>--->---(@ - A rose
||* - Handshake offered
||*) - Handshake accepted
:-x - Kiss kiss

o= - A burning candle to start a flame
~= - Flaming message
=- - A doused candle to end a flame
|<-> - Kissy face
[] - Hug
(-_-) - Secret smile
'-) - Wink
;-) - Say no more; nudge, nudge
:-* - Oops! (Covering mouth with hand)
:-# - Censored
:-8 - Talking out both sides of your mouth
>:> - Leer
:-X - Not saying a word
(:-... - Heart-breaking message...
:-o - "Oh, noooooo!" (a la Mr. Bill)
#:-o - Same as previous
---... - S.O.S.
:-< - Forlorn
|(- - Late night messages
(:-\$ - Ill
(:(- - Sad
%- - Hung over
:~/ - All mixed up
#-) - Another all-night partier
:-' - With a cold
%+{ - Loser in a fight
() - You're kidding!
<:-o - Eeek!
:-C - Unbelieving (jaw dropped)
:-(*) - About to vomit