Safety Net

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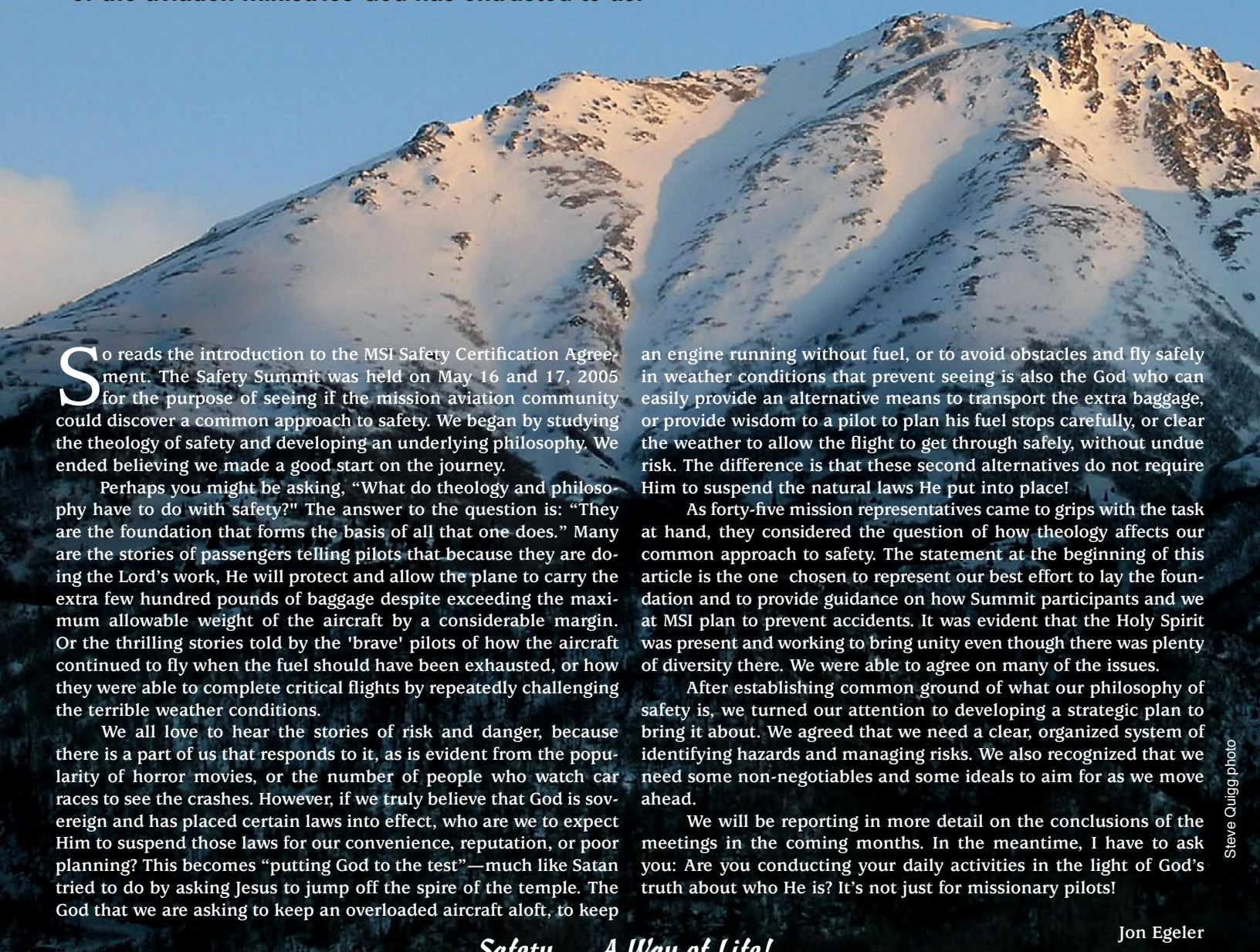
MSI Safety Summit 2005

Whereas God is sovereign, and He has ordered this world under natural and human laws, we affirm the need to implement common standards that allow us to safely serve, with accountability, as good stewards of the aviation ministries God has entrusted to us.



So reads the introduction to the MSI Safety Certification Agreement. The Safety Summit was held on May 16 and 17, 2005 for the purpose of seeing if the mission aviation community could discover a common approach to safety. We began by studying the theology of safety and developing an underlying philosophy. We ended believing we made a good start on the journey.

Perhaps you might be asking, "What do theology and philosophy have to do with safety?" The answer to the question is: "They are the foundation that forms the basis of all that one does." Many are the stories of passengers telling pilots that because they are doing the Lord's work, He will protect and allow the plane to carry the extra few hundred pounds of baggage despite exceeding the maximum allowable weight of the aircraft by a considerable margin. Or the thrilling stories told by the 'brave' pilots of how the aircraft continued to fly when the fuel should have been exhausted, or how they were able to complete critical flights by repeatedly challenging the terrible weather conditions.

We all love to hear the stories of risk and danger, because there is a part of us that responds to it, as is evident from the popularity of horror movies, or the number of people who watch car races to see the crashes. However, if we truly believe that God is sovereign and has placed certain laws into effect, who are we to expect Him to suspend those laws for our convenience, reputation, or poor planning? This becomes "putting God to the test"—much like Satan tried to do by asking Jesus to jump off the spire of the temple. The God that we are asking to keep an overloaded aircraft aloft, to keep an engine running without fuel, or to avoid obstacles and fly safely in weather conditions that prevent seeing is also the God who can easily provide an alternative means to transport the extra baggage, or provide wisdom to a pilot to plan his fuel stops carefully, or clear the weather to allow the flight to get through safely, without undue risk. The difference is that these second alternatives do not require Him to suspend the natural laws He put into place!

As forty-five mission representatives came to grips with the task at hand, they considered the question of how theology affects our common approach to safety. The statement at the beginning of this article is the one chosen to represent our best effort to lay the foundation and to provide guidance on how Summit participants and we at MSI plan to prevent accidents. It was evident that the Holy Spirit was present and working to bring unity even though there was plenty of diversity there. We were able to agree on many of the issues.

After establishing common ground of what our philosophy of safety is, we turned our attention to developing a strategic plan to bring it about. We agreed that we need a clear, organized system of identifying hazards and managing risks. We also recognized that we need some non-negotiables and some ideals to aim for as we move ahead.

We will be reporting in more detail on the conclusions of the meetings in the coming months. In the meantime, I have to ask you: Are you conducting your daily activities in the light of God's truth about who He is? It's not just for missionary pilots!

Jon Egeler

Steve Quigg photo

Full Throttle

Sometimes life plods along at a slow, predictable, pace—at other times it's like a blur. Lately, it has felt like more of the latter. In fact, so many things of timely importance have happened in the past few months that we're combining the May and August issues of ***Safety Net*** into one larger Summer issue.

I'm really excited with the response to the Safety Certification project that we saw at the Safety Summit. Clearly God's hand was at work in bringing an unprecedented spirit of unity and cooperation at both the Summit and at the International Association of Missionary Aviation (IAMA) conference that followed.

Right along with MSI's seemingly emerging role as a facilitator within the mission aviation community has been its tapping into aviation avionics technology in a significant way. Especially in light of the Capstone development and through God's leading, MSI is finding itself in a most strategic position to assist the mission aviation community and ultimately provide a humanitarian service to the world community in the implementation of this new technology. This obviously can't be done by just dreaming about it. A new thrust such as this requires significant resources—personnel to coordinate and guide the effort and finances sufficient to adequately fund this challenge.

In September of 2004, Cary Cupka joined us as MSI Research and Development Coordinator. Cary has a background in avionics and is especially gifted to help MSI in this new thrust. He has been following the development of the Capstone experiment from early on and is excited to have had a hand in seeing this new technology actually being tested by an MSI member. Don't miss his passionate comments on page 5!

The challenge now before us is to fund this new Research and Development thrust. In the February 2005 Safety Net we identified this immediate need to be $20,000. To us this seems to be a rather large amount. In proportion to what the MSI efforts might mean in reducing risk in mission aviation operations, it seems rather modest.

I ask you to consider whether you might be able to partner with us in this new R&D initiative. We have established a project account to help defray some of the expenses of this new ministry. This very critical and crucial area of service should help God's servants more effectively spread the good news of Jesus Christ.

Jon Egeler
President

Canada

On March 28th Gail and I started the long journey to Three Hills, Alberta to help lead a safety seminar for the students and friends of Prairie Bible College (PBC). Even though the college wasn't starting their post-Easter classes for another day or two, the aviation faithful turned up early for this specialized training. All forty-four aviators were challenged to incorporate 'SAFETY' into their daily routines, whether they were earthbound or airborne.

Steve Quigg photo

Whereas in the cockpit the tools of choice are flight controls, throttles, gauges, and radios, in this setting they were video projectors, PowerPoint programs, DVD's and demonstrations. With help from Jeff Plett of MAF-Canada and PBC instructors Dan Lawrance and Nick Swalm, the MSI team taught about pilots who really shouldn't be pilots, staying safe on the streets when living in an insecure environment, surviving an accident in the Canadian wilderness using the newest survival tools and radios, gleaning the hard lessons from recent mission accidents, and managing a marriage while serving on the field.

Steve Quigg photo

Just some of the students soaking in the instruction during the Safety Seminar.

While the guys were doing their thing, Gail was spending her lunch hours working with fifteen of the women and wives of those involved in the PBC Aviation Program. They talked about preparing for mission field living—things to look forward to and difficulties to avoid—and how wives influence the attitudes of their homes and husbands, both for good and bad.

All in all, it was a profitable time with wonderful people in a great program.

Steve Quigg

Alaska

MSI had a unique opportunity to go to Alaska this spring and interact with several different mission aviation organizations in that vast state. Although none of these agencies were MSI members at the time, there was enough desire among all to participate in a Seminar in the common interest of increasing safety. Jon Egeler, Steve and Gail Quigg, and Cary Cupka comprised the initial MSI team who headed north.

Prior to the Seminar, Jon, Steve and Cary attended a Safety Management Systems (SMS) course in Anchorage presented by the Medallion Foundation. This Foundation sponsors safety programs designed for Alaskan air carriers and general aviation. Mr. Steve Franklin is Program Manager of Medallion Flyers, the program targeting general aviation pilots.

Photo courtesy Medallion Foundation

Medallion's Steve Franklin

Following this, the MSI team flew down to the Kenai Peninsula to organize the Safety Seminar sessions for twenty-nine pilots and mechanics coming from nine different mission groups stationed across Alaska. SOAR International Ministries hosted the MSI Seminar in Kenai and provided their hangar for all the sessions. MARC, Soar and Arctic Barnabas graciously provided housing for Seminar attendees.

Photo courtesy Dr. Stewart

Dr . George Stewart

What a ministry these folks have all over the state, up into the Arctic regions and even over to parts of Siberia. SOAR visits Russia, setting up VBS programs in the summer and distributing Christmas gift stockings to children in winter. Arctic Barnabas flies in support of the missionaries living in small, remote villages where winters are long, depression is common, and "real" shopping is hundreds of miles away. MARC provides maintenance for other aviation ministries, but also operates its own flight service . Other pilots fly for Samaritan's Purse, Child Evangelism, InterAct, Send International and Pedro Bay Bible Church. The demise of any one of these pilots or programs would seriously impede the Christian outreach into this beautiful, yet hurting world. What a privilege, then, it was for us to work at keeping them safe and actively involved in their work.

Cary Cupka and Gail Quigg prepare to board the SOAR Panther Navajo for flight to Anchorage.

Our team was supplemented by Jack Hamilton, recently retired from US Airways, Alaska safety experts Steve Franklin, Dr. George Stewart from the University of Alaska and Embry-Riddle, and Stan Gerlitz from the local FAA Flight Service Station. For three days, representatives from these ministries enjoyed each other's companionship and interests as they participated in the Seminar sessions. These sessions included a special presentation by Cary Cupka on the importance of the Capstone program—initially developed in Alaska by an FAA/avionics manufacturers cooperative effort.

Retired USAir Captain Jack Hamilton speaks to Safety Seminar pilots.

Lynne Hamilton (freshly arrived in Kenai with her husband Jack) joined Gail and had the opportunity to spend two special evenings with fifteen of the aviation wives, most of whom were from the local area. In spite of living within twenty minutes of each other and being in the similar ministries, many of them didn't know each other. The first evening these wives were able to sit, talk, fellowship and bond with each other, something they'd probably never do otherwise. The MSI ladies were able to pamper the women with a relaxing time of kicking back, sharing fun stories, and getting a Mary Kay hand treatment and foot massage. Ministering year in and year out to everyone else, these women deserved and needed an evening like this to unwind and to get their batteries recharged. What an honor to be able to show Christ's love to them in this small way. The second night the women studied together, encouraging one another, finding unity in the body of Christ, and coming up with creative ideas on how to keep both their pilot husbands and families alive and well.

Gail Quigg washes the tired feet of a ministry wife during MSI Seminar in Kenai.

Capstone at work! Note the view in the MFD. The airplane is in the center of the screen over the green area. The mountains are just to the left, represented by the red area. Though the pilot can't see anything out the window, he knows precisely where he is and that he is in no danger of a controlled flight into terrain (CFIT) accident.

Alaska. What a spectacular land filled with awesome beauty, hardy people, moose, airplanes and adventure around every corner! What a privilege for MSI to have played a small part in helping to extend God's love through these varied ministries—all important in the extension of His Kingdom on earth.

Steve Quigg

The Climb to the Summit

It's amazing to think about the many places MSI Teams have been privileged to serve! MSI ministry has reached from the teeming humanity of Dhaka, Bangladesh to the wilds of Kenya's national parks; from the AIDS stricken streets of Gabarone, Botswana to the Brickyard slum outside Chihuahua, Mexico. One week we're in Calgary, the next in Anchorage. But the trip we were a part of last month took us farther than we had ever been on any Boeing airliner. It's a story worth telling.

As a group, missionaries are generally considered to be a rather hard-headed lot, but missionary pilot-mechanics, with their technical world-view, have to be the epitome of obstinacy on certain issues. Traditionally, mission aviators have been a cooperative and friendly bunch, until they started discussing really important issues—like loaning an airplane or a pilot to another organization. Then they start earning their reputation for hard-headedness in earnest. To be fair, their stand, to a certain extent, is understandable. Bush flying isn't for the faint of heart. It's not like getting into the minivan and driving over to the local convenience store. It's more like borrowing your friend's Ferrari and using it for a climb up Mount Kilimanjaro. It's demanding work, and there is always the suspicion that the other guy isn't quite as good, or talented, or careful, or whatever, as you happen to be.

Part of the 45 mission representatives engaging in some difficult thinking under the leadership of Jon Egeler. One mission representative commented essentially that this MSI Summit wasn't at all like other MSI Seminars or Summits. This one really made one think!

A most important part of the hard thinking had to do with coming to grips with what might be called a theology of safety. With Bible in hand, trying to discover Biblical principles relating to safety and then integrating them into the dynamics of aviation operations is not easy.

Over the last several years, however, we've witnessed a watershed of sorts, with mission aviation groups coming together in a cooperative spirit that has rarely been seen before. In the fullness of time, it seemed obvious that the moment was ripe for MSI to help the mission aviation community take the next step along the road of cooperation.

May 16 & 17 were the dates, the JAARS Center in Waxhaw, NC was the location, and MSI's Safety Summit II was the forum for bringing together a very diverse group of men representing twenty-six mission aviation programs from around the world. They provided the drive and energy to develop a common set of aviation standards by which to operate and cooperate. MSI simply provided the setting and direction with which to make it happen. Perhaps it was a bit presumptuous on our part to believe that there was any chance for success when nothing on this large of a scale had ever been attempted before, but by the grace of God and two very intense days of negotiation and consideration, we actually came away with the framework of an agreement! It wasn't exactly the plan that we had envisioned going in, but it became obvious after a day and a half of prayerful give and take, that it was the solution that had the best chance at real success.

Sometimes hard questions demand concentrated effort before a thoughtful response can be given.

So now what? The next step is for the representatives who were at the Summit to share the results of this cooperative effort to their organizations—to the point where their mission leadership understands its importance and agrees to have their mission counted on to be a supportive part of the emerging vision. The step after that is establishing a Safety Certification Program—a Good Housekeeping Seal of Approval if you will—for the mission aviation community. The big step after that is opening wide the door of cooperation and efficiency between mission aviation groups, while raising the bar of safety and hopefully lowering insurance premiums at the same time.

We've taken the first step down a long, long road ahead and we're anxious to see where it leads next. It should be exciting! We'll keep you informed.

Steve Quigg

Research & Development

MSI President, Jon Egeler, has asked me to share a bit of how we are approaching this new service to the mission aviation community. I'm grateful for this opportunity to let you in on what is involved.

The purpose of Research and Development (R&D) at MSI is clear—identify threats to mission aviation safety, look at emerging technology, gather and organize research data, network with agencies involved in developing strategies and products, propose realistic solutions and share the results for the purpose of increasing the safety of missionary aviation.

The first phase of R&D is to accurately define a common problem in relation to the people and the context in which the problem is experienced. This is where MSI is strategically positioned to offer a valuable service. Our frequent contacts with many mission agencies over the years allow us to recognize problems common to missionary aviation from a broad perspective. This gives MSI the opportunity to propose comprehensive solutions.

Cary Cupka presenting the MSI vision for adapting the Capstone concept to mission aviation operations.

Once a problem is well defined, the next step is to see what can be done to solve the problem. The objective here is to know what products are already available that may offer a solution to a field problem. It may also require the tedious work of culling through documents or attending Seminars, interacting with regulatory agencies, manufacturers, government agencies, etc.

After this comes the monumental task of organizing all the research data and developing a reasonable, coherent, and presentable plan that appears to adequately address the problem.

With the problem clearly identified, a solution proposed, and a workable plan created, the final step is to encourage manufacturers to build the appropriate product(s) and/or systems and for mission agencies to consider and test the product/system suggested. This is a crucial point in the whole process. It requires a certain amount of risk and courage. It's one that MSI is prepared to take and we believe missions are also willing to invest in for effectiveness and safety in their operations.

Our first R&D coordination effort is in regard to the threat of collisions (both flight into terrain and midair) and the new technology developed in Alaska known as Capstone. MSI has been promoting the Capstone project since we first spoke to the FAA officials manning the Capstone booth at the 2004 Oshkosh AirVenture. Through referrals in the missionary aviation community we learned that MARC—a missionary aviation organization in Alaska— has been involved with Capstone from it's beginning in 2000. We solicited their opinion on this technology and received an enthusiastic endorsement that we posted on our web site.

We later learned about the FAA's partnership with stateside departments of transportation in a government development project to bring the Capstone technology researched in Alaska down to the lower 48. It turned out that North Carolina (NC-DOT) had been the first to cover their state with the ground based radio signals required for the system. To stimulate a good cross-section of aviation users, NC-DOT sought to equip about ten airplanes around the state in which they could install the avionics equipment necessary to promote the Capstone technology.

We recommended two North Carolina based MSI members to NC-DOT for this program. Based on the relationships we had established through the FAA, NC-DOT then offered JAARS a contract providing free equipment in exchange for cooperating with the program requirements. JAARS made a formal decision to participate just in time to provide a technology demonstration for the IAMA conference.

NC-DOT representative Steve Merritt (center) displays the new Capstone avionics equipment to representatives of the JAARS decision-making team of Don Warfel, Gerry Gardner, and David Ramsdale (l. to r.)

At this moment, the aviation industry is expecting MSI to come up with a plan to guide implementation of Capstone technology in overseas remote environments. This formidable task is going to require assembling a team of individuals who have expertise in many different areas. Government and industry professionals are waiting to help. Mission agency representation is essential—providing realistic field perspectives. Clearly, such a task requires money as well as time commitment on the part of all those involved.

MSI has accepted its role in this challenge. I am bold to ask that you add MSI's new R&D efforts to your prayer and carefully consider whatever active participation God would have you play in seeing this team project—and others to follow—to completion.

Cary Cupka
CCupka@msisafety.org

Moody Aviation Safety Seminar

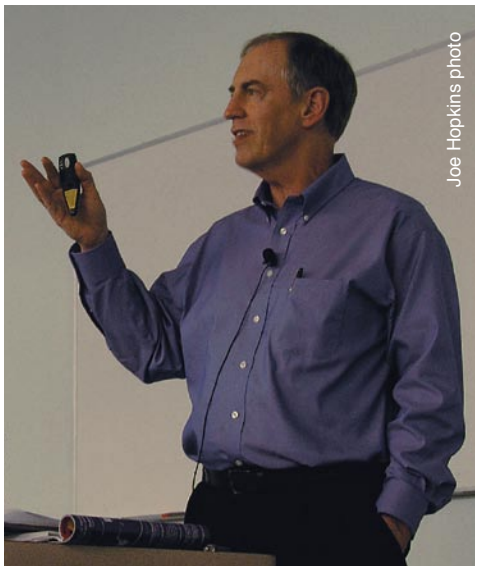
As we at MSI approached the end of last year, we wondered how the end of the era at Moody-Elizabethton would affect us. We were due to sponsor our biennial Safety Seminar at Moody in 2005. With the imminent close of the school and the much reduced class size, would the Moody Administration bother making the effort to make the seminar happen?

The answer was a resounding "YES". A school which prided itself on the quality of its students wasn't about to do a swan song and just whimper away into the sunset. After all, what kind of message would it be sending its senior class if it didn't bother fulfilling its obligation to safety? Well, if Moody was going to have a seminar, we were determined to make it one worth remembering.

So, who does one get to come to the last seminar to ever be given at Moody Aviation in Elizabethton? You must have MSI founder Joe Hopkins—Moody has never had a safety seminar without him. You have to have Jon Egeler, who had just left Moody to become MSI's president. Daryl Bussert, JAARS Director of Safety is a regular at these things, and he brought along JAARS Glenn Grubb who was in-between assignments to Indonesia. Tim Doggett was the veteran missionary pilot to Africa tapped to provide a real mission-world perspective. Cary Cupka, MSI's new R&D specialist provided the lunchtime technical entertainment with news on the Capstone project. And I was back for my fifth Moody Safety Seminar, third as a presenter. But we needed a "name", someone who could really grab the headlines.

What better name could we possibly get from the aviation safety world than another "Hopkins"? The new guy, however, wasn't just another Joe. This Hopkins was Jay Hopkins, the well-known *Flying* magazine columnist, the founder and president of Error Prevention Institute, and the consultant that helps companies like Lockheed-Martin save millions of dollars through reduced accident losses and insurance premiums.

And so the stage was set for the January seminar and everyone did their part with aplomb, proficiency and grace. During the presentations, Cow paths were turned into Super Highways, accidents became analyzed, jungle airstrips got "jepped", excellence became the standard by which to live, lessons were learned from a Castaway, dramatic new technology was incorporated into the cockpits just over the horizon, common mission standards provided hope for the future, and we all learned how the huddle process could turn an accident waiting to happen into an accident that never was.



Safety Consultant and author Jay Hopkins emphasizes a point while using video projector at the final MSI Safety Seminar for MA Elizabethton.

Steve Quigg

Moody Aviation Elizabethton Finale

On May 28, 2005, Moody Aviation (MA) publicly celebrated the closing of aviation training at its Elizabethton, TN campus. For 59 years, MA has been preparing pilots and mechanics for service around the world—to the point some have called it the West Point of mission aviation training. Starting in a quonset hangar on the Elmhurst, IL airport, in the early 50's the growing MA needed larger facilities and was able to purchase the Wooddale, IL airport. Two decades later MA moved to Elizabethton and built its beautiful campus.

Moody Aviation Elizabethton's final banquet was a meeting of friends from many different ministries who had some involvement in Moody Aviation over the years. Here Chuck Bennett (left), MA graduate and former President of MAF and several other organizations, is joined by former Moody Bible Institute Vice President and Academic Dean Dr. Howard Whaley and wife Lorraine. In the background, Dirk VanDam, former Moody Aviation Director, chats with other long-time friends.

Since the closing of the Elizabethton facility was announced in 2003, the school has been in the process of slimming down one class at a time until now. Although some training aspects will continue through June 30, the last flight school students graduated on May 27, 2005.

What to do when an era ends? MBI decided to host a banquet in its spacious Elizabethton hangar for as many of the MA alumni that could attend. It was a most appropriate conclusion to a great chapter in the history of MBI. Many of the approximate 450 guests were "old timers" who had been students at Moody Aviation in the early days. Someone suggested there had never been any other gathering at which so many missionary aviation personnel were in attendance—along with the notion that, as wonderful as this fellowship was, it's nothing compared to what it's going to be like in Heaven when all mission aviation colleagues will be there celebrating together!

Dr. Howard Whaley, now retired from Moody Bible Institute, was the featured speaker. Howard is no stranger to aviation, having been a Navy pilot before his coming to MBI. He spoke of the history of Moody Aviation from its early days and encouraged the group to rejoice in the good things that the Lord has done in and through the MA program over the years.

All in all, it was a very fitting conclusion to a significant part of the vision encapsulated in the seed Paul Robinson sowed in the minds and hearts of MBI leadership back in the late 40's. It was an event to be remembered for a long time—with thanks unto the Lord for what has been accomplished. What a legacy!

Mission Safety International, Inc.
328 E. Elk Avenue, Suite 1
Elizabethton, Tennessee 37643-3351
Telephone 423-542-8892 FAX 423-542-5464
E-mail info@msisafety.org www.msisafety.org

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