

Frasca Flying High

The Wheel Comes Full Circle

With three generations of the Frasca family now working at the company's Urbana, Illinois facility, Frasca International cannot be accused of being a flash in the pan. The company was formed by former US Navy engineer, Rudy Frasca. After leaving the Navy in 1952 and spending six years with the University of Illinois as an instructor and simulator maintenance engineer, Rudy Frasca began to look at ways of offering the aviation community a new approach to training.

His first product was named TruFlite and today, the company has used this name for its latest generation training device. Although the wheel has come full circle in terms of a name, there is little to compare the technologies used in the two devices. Over the intervening years, Frasca flight training devices have been sold all over the world where they are used by military, commercial and collegiate flight training organisations.

With R&D focused on enhancing established product strategies and sales split over three distinct market sectors, Frasca seems to have the right business model to survive the trials and tribulations of the global market. Indeed, as many Frasca competitors have fallen by the wayside over the years, the company is today, still going strong and bringing new products to market.

"Having a wonderful idea without the technology to support it is just useless," says Frasca International's General Manager, John Frasca. "We have traditionally enhanced our trainers with new technology only after it has been proven and so our customers know that when they order from us they will receive a product which meets their expectations and is supported throughout its life."

On a recent visit to Frasca's factory at Frasca Field near Urbana, the author had the opportunity of walking around the factory floor to see the range of training systems being delivered by the company. Frasca is currently delivering

between 40 and 50 training devices a year and this, says John Frasca, allows development costs to be amortized across the year and not dumped on one or two customers.

In August, the factory contained a number of new trainers including a Level 6 CRJ for Embry Riddle Aeronautical University, two Beech Bonanza's for the Finnish Aviation Academy, a Level C King Air for a customer in Japan, TruFlite devices for the University of North Dakota as well as a US Army TH-67 helicopter trainer and a flight training device for the T-6.

As well as these type specific, higher fidelity devices, the company still manufactures its full range of single and twin-engine training devices, the famous 100 and 200 series of trainers. The overwhelming feeling to impact the observer is that the technologies being used by Frasca over recent years have now propelled the company into a position whereby the Level D Full Flight Simulator (FFS) is a manufacturing reality. The realism of systems such as the Computer Generated Instrumentation (CGI), digital control loading and cockpit hardware is up there with the big boys but does this mean that a Level D FFS is on the cards?

"We have our own motion, control loading, visual system, digital sound system, instrument displays, instructor station and overall technology expertise to bring this



Company founder, Rudy Frasca with his son John, the company's General Manager at the company's Urbana factory.

(Source: Frasca)

together," says John Frasca. "The question is, do we want to do it now? The FFS market is cut throat and so any entry that we might make will depend on a number of factors, not least who the customer is."

Continuing the theme of realism, company founder, Rudy Frasca tells *Touchdown* that when entering a training device, the pilot must accept his synthetic environment as he does the real aircraft. "I call this the reverse training transfer," says Rudy Frasca.

"You can see this on the Level 6 devices we have delivered to ERAU where pilots get the same experience in the trainer as they do in the real aircraft; even down to



Frasca is producing around 40 to 50 flight training devices a year. Customers include commercial flight training organisations, universities, flying clubs and the military.

(Source: Frasca)

Although patently smaller than CAE, the strategy that links these two companies is vertical integration. Like the Montreal Mauler, Frasca manufactures most of its components in house. From visual systems to upholstery, Frasca builds on site.

"Vertical integration works for us because we can control costs, quality and lead times," says John Frasca. "It is also one of the reasons why we can deliver quickly and on time."

the increased air flow through the air vents when the pilot pushes the nose down."

Employing around 180 staff, as well as a number of summer interns from the aviation faculty at the University of Illinois, Frasca International bases its success on a strategy which holds equipment, price and service as the three key components of its offering to the customer. These factors were key when ERAU decided to select Frasca International for its new family of Level 6 FTDs. According to John Frasca, this programme was the catalyst that allowed the company to bring together its current range of simulation technologies into a single product line and also help to define the company's new TruFlite product.

TruFlite is a reconfigurable device to enable flight training for both single and twin engine aircraft. Using Frasca's CGI and realistic overlays with bezels, screws, glass and knobs, the Frasca TruFlite device can be converted between a twin engine general aviation aircraft and a single engine aircraft in around three minutes. The new device features a two seat wide cockpit with a new lower profile

shell; Garmin 430 GPS, Digital audio and sound, multi to single engine conversion kit, Frasca's TruVision textured visual system with 170 degree wrap around display and a single set of flight controls with an option for dual controls.

TruFlite has also spawned names for a range of simulation sub-systems. TruVision is the family name for its line of visual systems which are available in single and multi-channel configurations providing up to a 220-degree field of view. Other products include: TruSound, a digital sound system; TruFeel, Frasca's control loading system and TruScore; Frasca's virtual scoring module available with the company's Graphical Instructor Station (GIST). The latter can be used for pilot selection and scoring.

For a period around five to six years ago, some were saying that Frasca had fallen behind the technology curve. The company's range of new products clearly highlight that this view is far removed from the fact that today, the company has some world beating technologies that span the complete gamut of simulation design.

The company's status in the aviation training sphere is based upon a strong 45 year pedigree of experience and a continued investment in its products and new and appropriate technologies.

The last word belongs to Rudy Frasca, founder and President of the company. "If you're impressed today, come back and see what we're doing in another 45 years."

The company has now completed the delivery of a range of Level 6 FTD's for Embry Riddle Aeronautical University's Prescott and Daytona Beech facilities.

(Source: Frasca)

