

Glenbrook Technologies

– branching out

Our recent travels took us to the family-run company of Glenbrook Technologies, run by husband and wife team Gil and Claire Zweig. Gil's son, Steve Zweig, is also active in the business as vice president of sales, and he is kept constantly busy exploring new markets and territories and keeping distributors up to speed with latest developments.

Based in Randolph, New Jersey, in the shadow of the legendary Thomas Edison research laboratory, Glenbrook started in 1983 providing x-ray equipment to the electronics manufacturing industry. Although still the main part of their business, Glenbrook have expanded into the security and medical markets with customised equipment to meet specific requirements.

In today's security-conscious market, Glenbrook Technologies appear to have hit on a niche that offers an unparalleled level of safety to government offices, embassies and other high-risk establishments around the world.

Using the Mailscope machine and Glenbrook's patented x-ray technology, the system can detect minuscule particles, such as a few grains of salt in the middle of a pile of incoming mail. This capability has gained Glenbrook such prestige accounts as the US Army, Singapore Law Enforcement and many other security agencies around the world.

Interestingly, Gil Zweig, Glenbrook's enigmatic CEO, has received special clearance from the Department of Homeland Security to carry sample letter bombs in his carry-on luggage when flying to customer meetings around the world. Gil commented, "It's frightening how many security screening personnel do not uncover or recognize these materials when travelling through airport security." (Figures 2 & 3)

This same technology has also found a niche application in the medical field, where it is used to examine stents or pacemakers implanted into patients bodies.

Inside the technology

Although x-ray technology was first invented by Dr Röntgen in Germany, it was Thomas Edison, four years later, who discovered x-ray phosphorescence and patented his discovery. This was to be the only patent that Edison donated to the public domain.

The key to Glenbrook's success has been their patented MXRA[®] real-time x-ray imaging camera with unmatched resolution and sensitivity that enables the camera's electro-optical control to variably magnify x-ray detail up to 40 times on a video monitor. The MXRA[®] camera is essentially an x-ray microscope that was developed from a combined, in-depth knowledge of x-ray phosphors and night vision technologies.

Significantly, it means that Glenbrook systems can magnify details up to 40 times without having to move the object towards the x-ray source, a common method of magnification referred to as 'geometric magnification,' which requires costly micro-focus x-ray tubes. MXRA[®] magnification technology does not, resulting in a machine that is roughly one-third of the cost of most of its competitors.

The unique capabilities of the high resolution x-ray inspection systems from Glenbrook certainly give this small company its own place in the evolution of x-ray technology.

Trevor Galbraith



Figure 1. Glenbrook's RTX-113 for production-based, real-time, rapid x-ray inspection.



Figure 2-3. Sample letter bombs. "It's frightening how many security screening personnel do not uncover or recognize these materials when travelling through airport security."



Figure 4. The Jewel Box 70T, a real-time x-ray video recorder.



Figure 5. The Jewel Box 90T, a compact, microfocus, high-magnification, real-time x-ray inspection system.