

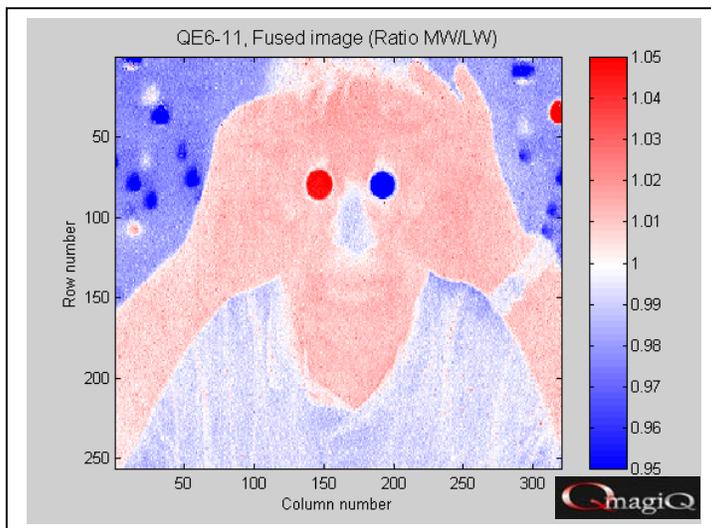
## QmagiQ announces a dual-band QWIP focal plane array

QmagiQ publicly unveiled its first prototype of a midwave-longwave (MW-LW), spatially registered, dual-band, 320x256 focal plane array at the SPIE Defense and Security Symposium held in Orlando, FL, March 29-31, 2005. The detector consists of two QWIP structures stacked on top of one another, designed to absorb at peak wavelengths of  $\sim 5 \mu\text{m}$  and  $8.6 \mu\text{m}$ , respectively. The focal plane is hybridized to Indigo Systems' ISC0006 two-color read-out integrated circuit.

Among the many dignitaries in attendance was Richard R. Dennis, QmagiQ's very own director of manufacturing, who also happens to harbor a secret longing for fame as an actor. Seizing on this unique opportunity, Rich improvised an amazing trick for the whole world to see. The event was recorded for posterity by our dual-band camera system using a 25-mm, F/2.3, wideband lens made by Janos Technology.



The performance revolved around two optical filters used to mimic a pair of eyeglasses. The first transmits only in the MW band. Rich held that one in front of his right eye. The second transmits only in the LW band; Rich held it in front his left eye. The result is two simultaneous, spatially registered images giving the disconcerting (but decidedly false) impression that Rich can't sort out which side is which. Also visible in both bands is the signature of what appears to be an unusually cold nose. Why Rich is endowed with a characteristic normally associated with healthy puppies has long been something of a puzzle to us.



The temptation to instantly engage in creative data manipulation the minute a new toy becomes available is hard to resist. In keeping with that tradition, the picture at left is a fused image obtained by simply by dividing the MW signal by its properly scaled LW counterpart. With this scheme, hotter objects (which emit predominantly in the MW) are displayed in red, while cooler ones appear blue. Unless optical filters are in the way, in which case all bets are off. For example, it looks as though one of Rich's eye is burning hot while

the other one is ice cold. Pure optical illusion, of course, due entirely to the filters. By virtue of its bluish tint, the nose remains stubbornly cooler than the rest of the face. We anticipate these observations to touch off a rush of interest in the otorhinolaryngologic community.

And thus it is that Rich Dennis achieved a certain degree of immortality. While he is clowning around in front of the camera, the rest of us are busy collecting performance data on the focal plane, which will be released in due time on our web site.

Contact QmagiQ to inquire about the availability of this new class of focal plane to monitor noses, missile launches, buried land mines, warhead decoys, or any other target of interest.