



Steve Hickok

Steve Hickok, president of Hickok & Associates Inc., managed initial helicopter GPS flight testing for the FAA in the 1990s, developing many of the policies and criteria used in current helicopter GPS instrument approach procedures.

by Jen Boyer

Vertical: You have had such a unique impact on the industry in regards to IAPs, how did you become so connected to this aspect of helicopter flight?

Hickok: I am a retired Coast Guard helicopter pilot. My last assignment was in the early 90s managing the FAA's helicopter GPS flight test programs. When I retired, I decided to continue my work by starting Satellite Technology Implementation (STI), a company that developed instrument approaches for helicopters. Instrument approaches were essentially the domain of the FAA, but they were still hand drawing them. I knew the only way I could convince the FAA to work with me was if I developed a computer model that created the approaches electronically, thus eliminating human error and

providing repeatable products. After a lot of lobbying and convincing, the FAA accepted my work.

STI was dissolved in December 2003, and I formed Hickok & Associates Inc. We work with individuals, companies and organizations to develop special instrument approaches for everyone from the private owner to hospitals and public heliports. I also stay involved in flight testing under contract to the FAA.

Vertical: How many approaches have you developed?

Hickok: I guess my companies have done more than 200 approaches, roughly 90 per cent of the helicopter GPS approaches approved by the FAA. Most are to hospitals, so thousands of patients have benefited. As an FAA-designated procedure evaluation pilot, I evaluate the heliport site, design the approach on the computer while on-site, then fly the approaches day and night to complete the visual segment and night evaluations. I then complete the final development and submit the approach package to FAA for approval.

Vertical: Is there a project you are working on now that really piques your interest?

Hickok: I'm working on a pro-bono basis to help develop a series of special approaches into the Manhattan heliports, to be used by corporate flight departments, emergency responders, law enforcement and homeland defense. These are the first simultaneous non-interfering helicopter IFR approaches ever done. They will not only increase the capabilities for helicopter operations, but will also safely increase capacity for the airlines and ATC in a complex airspace system.

Vertical: What obstacles do you face in your work?

Hickok: I have about 50 approach procedures on contract at the moment. Of those, at least

a third would benefit with reduced minimums if we could use SAAAR [special aircraft and aircrew required] or RNP [required navigational performance] approaches like fixed wings [do]. The problem is helicopters don't have SAAAR or RNP criteria. WAAS [wide area augmentation system] provides the signal-in-space for our SAAAR and RNP capabilities, though. Consider that a hospital helipad in a downtown area is typically in an obstacle-rich environment. Current GPS criteria require 250 feet of obstacle clearance covering a large area. A SAAAR or RNP approach using WAAS will reduce this area substantially, thereby reducing the number of obstacles and allowing for lower and more operationally effective minimums.

Vertical: What are you doing to try to remove the obstacles to improved approach procedures?

Hickok: I represent the Helicopter Association International on the Performance-Based Operations Aviation Rulemaking Committee (PARC), a group of aviation professionals such as airlines, pilot unions and aviation associations working with the FAA to help improve approach criteria. The problem is that the fixed-wing criteria and policies are developed using fixed-wing equipment and performance. My challenge working with this group is to get criteria to work with rotary-wing performance and our equipment.

I'm also chairman of HAI's Flight Operations Committee. We bring together the industry and the FAA to develop operational solutions. So, I'm working a couple of directions here. PARC is criteria and policy, the flight ops committee is operational implementation of those policies and criteria.

Finally, I also serve on ICAO's Obstacle Clearance Panel as the representative from the International Federation of Helicopter Associations. This group establishes obstacle clearance rules for PANSOPS [Procedures for Air Navigation Services - Aircraft Operations], used around the world.

