

SUPPORTING RAPID TRAINING OF MILITARY SURGICAL NURSES



PROJECT	NGRAIN [®] PRODUCER [®] SOFTWARE FOR SURGICAL NURSES TRAINING
CLIENT	UNITED STATES AIR FORCE
KEY OBJECTIVES	<ul style="list-style-type: none"> ▶ INCREASE KNOWLEDGE OF SURGICAL INSTRUMENTATION ▶ INCREASE TIME FOR HANDS-ON PRACTICE ▶ EASILY CREATE EFFECTIVE AND EFFICIENT TRAINING

surgeries, it is essential that nurses are able to locate any instrument quickly, and without error.

“The key to successful peacetime and wartime nursing operations is a robust nursing force, a force with the right numbers, right experience and the right skills.”

Major General Kimberly A. Siniscalchi *

BACKGROUND

With one million new nurses required by 2016, and shortfalls projected to reach as high as half a million by 2025, the United States is facing a critical shortage in qualified nurses. This nursing manpower crisis is reflected in the challenges facing the United States Air Force (USAF), which has a Total Nursing Force of 19,000 men and women in its Active Duty, Air National Guard, Air Force Reserve, civilian, and contract forces. Today over fifty percent of the USAF’s new nurse recruits are novice nurses, having less than six months nursing experience, and requiring training.

Surgical nurses play a critical role in the USAF medical team. As part of their training, surgical nurses must be familiarized with surgical instruments, how to handle them, and how to correctly prepare a surgical tray. These instruments number over 80, with many closely resembling each other. During

CHALLENGE

Medical Training Teams are challenged to deliver effective, time efficient training to nurses on surgical instrumentation. Due to supply limitations, each nurse cannot be provided with a set of the surgical instruments for training, meaning hands-on training time is limited.

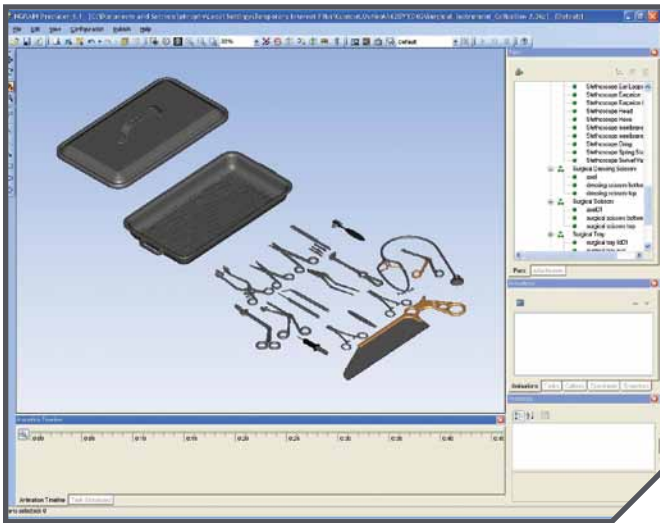


Surgical instruments

* Assistant Air Force Surgeon General, Medical Force Development, and Assistant Air Force Surgeon General, Nursing Services, Office of the Surgeon General.

SOLUTION

NGRAIN Producer — with its unique ability to allow real-time removal and replacement of 3D objects, and support of quick, cost effective development of 3D equipment simulations — was selected by the USAF. With Producer, the training team is able to create 3D simulations, which include animations, movement constraints, and practice tasks, in less time than it would take to create a 2D animation.



Surgical instruments visualized using NGRAIN

RESULTS

With NGRAIN, nurse trainees each receive their own virtual set of surgical instruments, which they can use anywhere, anytime to familiarize and refresh themselves on the identity, location, and handling of the over 80 surgical instruments. The result is faster, better nurse training, supporting the objective of turning novices into fully qualified, mission ready nurses.

TECHNOLOGY IS BOOMING IN THE MEDICAL TRAINING FIELD TODAY, AND NGRAIN IS A KEY PART OF THIS.