SmartItem™ vs AIG

You've heard the terms, but what do they mean?
Here are some of the differences between
Caveon's SmartItem and Automatic item generation (AIG).

Number of items

1

The goal of SmartItem technology is to reduce the size of an item bank to, ideally, one item per objective.

The goal of AIG is to expand an item bank by creating hundreds or thousands of items automatically.

Goals

2

While security is one goal, a SmartItem has other equally as important goals, such as cost savings, fairness, convenience, etc.

The goal of AIG is increase item capacity, "primarily because of concerns with security." (Henry Braun, ETS, 2002)

Transitory vs Static

3

Item versions are created on-the-fly. While the test-taker data is captured, the item is transitory and it is unlikely it will ever be seen again.

Item versions created from AIG are static, saved and formalized items.

Field Testing and Review

4

Item versions created by a SmartItem do not need field testing or review beyond the quality-assurance process of the entire SmartItem.

Item versions created from AIG are usually reviewed and/or field tested during the development process.

Unused Items

5

Item versions are created by the SmartItem on an as-needed basis. There is no waste.

Many item versions created from AIG may not ever be used because there will be no need for them.

Security Concerns

6

By covering an entire objective with numerous item versions, a SmartItem enhances security by making theft irrelevant and most forms of cheating impossible.

AIG enhances security by having a large number of replacement items to use when original items are compromised.

Forms

7

Utilizing SmartItem technology eliminates the need for forms and many other features of traditional test design.

AIG creates items that fit within existing test designs, such as the use of equivalent or equated forms.

Random Error Variance

8

Item variations are NOT assumed to have equivalent statistical properties —increasing the random error variance to remove much larger systematic error variance due to cheating.

AIG attempts to reduce error variance by relying on item models that are pre-calibrated to produce item variations where the calibrations can apply.

Caveon SmartItem™ patent-pending
Source: http://www.caveon.com