

Biometric Comparison Side by Side Comparison Chart

Characteristic	False Accept* Rate	False Reject Rates (after 3 tries)*	Failure to Enroll (indication of outlier population)*	Issues Affecting FRR	Scalability	Interoperability	Encryption Security	Stability Through Lifetime	User Interface	Safety Issues	Privacy
Iris Recognition	1:1.2 Million	0.1 - 0.2%	0.5%	Alignment of iris to camera	<ul style="list-style-type: none"> Able to handle 1:all searches in extremely large databases Provides fraud screen capability 	Open, scalable Private ID/KnoWho architecture supports interoperable hardware and software	3DES	Very stable - only one enrollment necessary	Easy to use	<ul style="list-style-type: none"> Uses low levels of near-infrared illumination Meets eye safety standards 	User chooses to enroll
Fingerprint	Vendor specific; typically 1:100,000**	2.0 - 3.0%** to achieve a 1:100,000 FAR rate	1.0 - 2.0% depending on technology and vendor	Dryness, dirt, oil, scars	<ul style="list-style-type: none"> Large databases require binning or filtering & may return multiple candidate matches Fraud screen capability may require back-up ID for multiple matches 	<ul style="list-style-type: none"> Many vendors, no interoperability standards Depending on vendor, may have AFIS interoperability 	Varies with vendor	Changes with physical work, trauma, disease – re-enrollment may be necessary	Moderately difficult to use	Requires contact-hygiene issue	<ul style="list-style-type: none"> User chooses to enroll Storage of latent prints
Hand Geometry	Vendor specific; typically 1:10,000**	~10.0%** to achieve a 1:10,000 FAR rate	0.0%	Hand injury, age, some medical conditions	<ul style="list-style-type: none"> Large databases require 1 to 1 match No fraud screen capability 	Several vendors, no interoperability standards	Varies with vendor	Changes with age, physical work and medical conditions – re-enrollment may be necessary	Moderately difficult to use	Requires contact-hygiene issue	User chooses to enroll
Facial Recognition	Vendor specific; typically 1:100**	10 - 20%** to achieve a 1:100 FAR rate	0.0%	Lighting, age, glasses, head/face coverings	<ul style="list-style-type: none"> Large databases require 1 to 1 match No fraud screen capability 	Several vendors, no interoperability standards	Varies with vendor	Changes with age and facial hair – re-enrollment may be necessary	Easy to use	None	Can be enrolled without users knowledge at a distance

* Biometric Product Testing Final Report (19 March 2001, Center for Mathematics and Scientific Computing, National Physics Laboratory, U.K.) [Click Here for NPL study](#)

** The False Accept Rate and False Reject Rates for these technologies are dependent on each other. End users may have the ability to configure the system to decrease FRR at the expense of FAR. For example, if the customer requires a system with a very low FRR, the user can configure the system to achieve a low FRR but the system would then have a very high FAR. The advantage of iris recognition is that there are no user adjustments for the FRR/FAR settings. Iris recognition will provide a very low FRR with an extremely low 1:1.2million FAR.