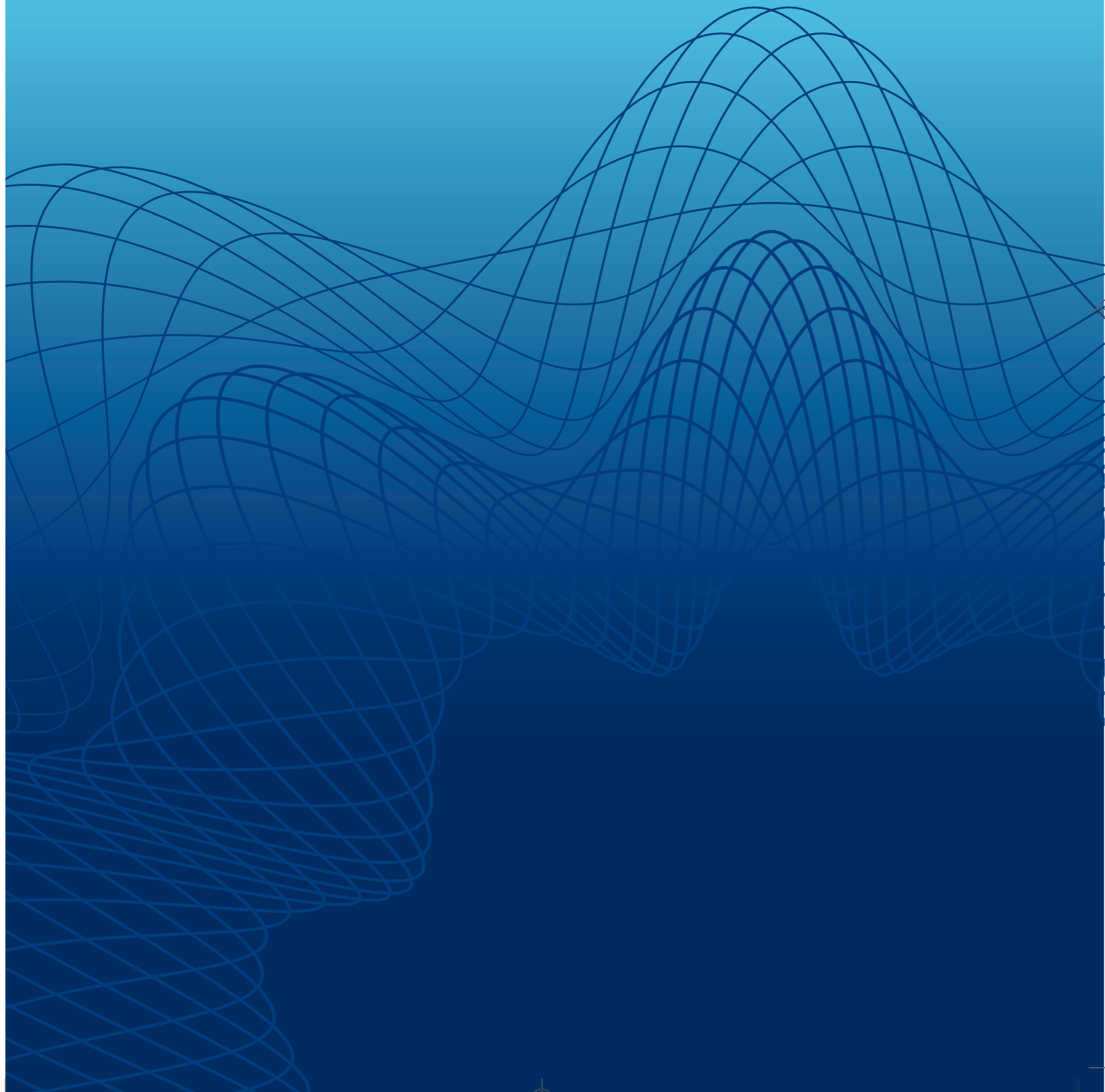


**OpSec** *Banknote & High  
Security Documents*



## Cost Effective Protection Solutions



OpSec Security exists to protect business and governments from the growing threat of counterfeit, fraud and diversion by securing their products, documents and systems.

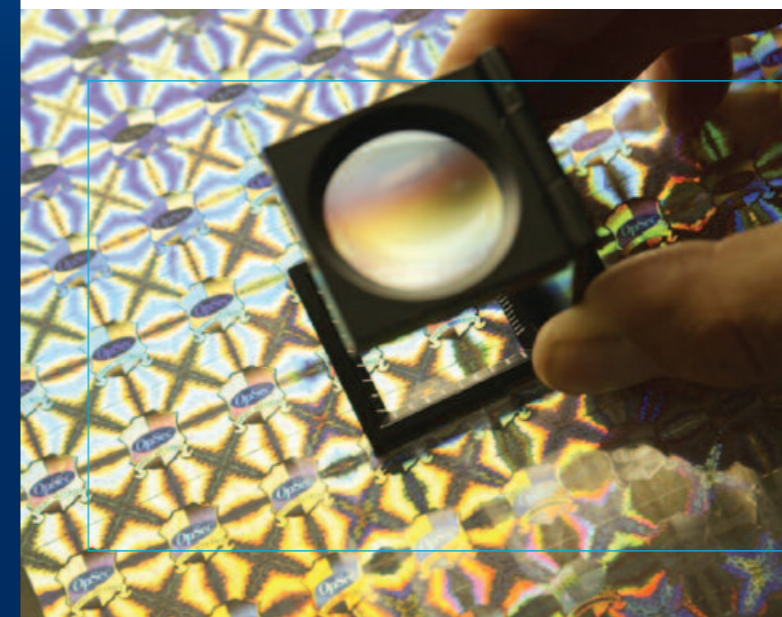
- One of the world's leading providers of secure holographic and non-holographic optical technologies and services: we have been pioneering innovative solutions for currencies, identification documents and branded goods for over 20 years.
- Our customers include global brands, brand owners, governments, agencies and security printers.
- A bespoke solutions provider: we work in partnership with government and corporate clients to identify and develop the most appropriate approaches.
- An industry expert and a founding member of the International Hologram Manufacturers Association (HIMA) and ISO 9002 certified.

OpSec provides a broad range of technologies to assist our customers in developing comprehensive anti-counterfeiting and brand protection solutions.

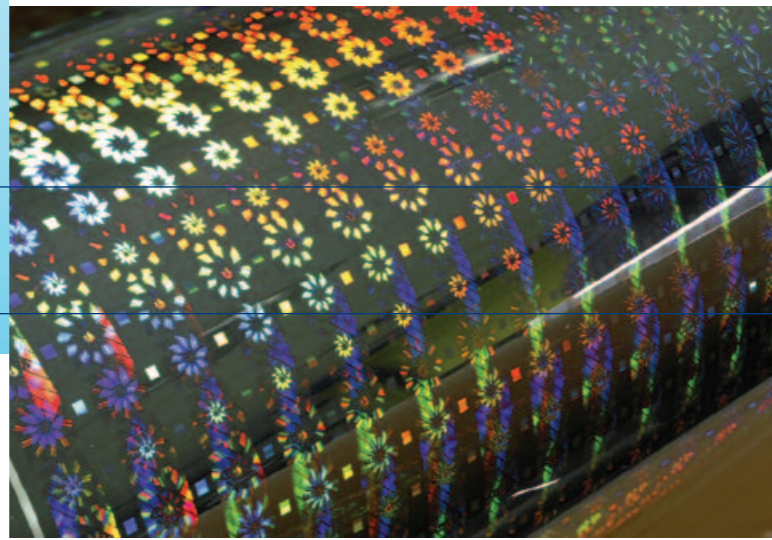
OpSec is the only global provider of anti-counterfeiting solutions and services with this breadth of technologies available from a single source. The breadth of technologies further distinguishes OpSec from many competitors who rely on only one technology or technology type to protect against a multi-faceted threat.

### OpSec's technology portfolio includes:

- A broad range of *overt* and *covert* tagging technologies.
- A very large range of *carriers* by which technologies are applied to products and documents.
- A number of *information bearing marks* – both overt and covert – that can be incorporated into these carriers, and comprehensive database architecture to track and trace the marks through their effective lives.
- Numerous *verification technologies*, from overtly visual through to forensic authentication .
- A *complete suite of software products for monitoring the internet* against logo and domain abuse, production and sale of counterfeit merchandise, and other forms of internet-related loss.



## Technologies and Services



OpSec Security > 5

The unique security features of optically variable devices (OVD's) are widely recognised as providing the most cost effective solution to the problems of counterfeiting and forgery:

- Complex proprietary origination processes prevent exact replication of OVD's
- Unique optical properties cannot be reproduced by colour copiers or scanners
- Physical properties expose attempts at removal or alteration
- Dynamic visual effects allow immediate identification and ease of recognition
- Unique covert information can be incorporated and interrogated

### Optically Variable Devices (OVD's)

OpSec prides itself as having the most comprehensive range of OVD technologies within one company. Purpose-built, state-of-the-art laboratories in both the US and the UK develop and produce OVD imagery that is the envy of the industry.

Technologies include 2 and 3 dimensional imaging, complex computer-generated kinetic designs and ultra-high resolution imagery. OpSec's extensive R&D program has resulted in the capability to combine multiple technologies into a single image in order to create OVD's that present a significant barrier to counterfeiting.

OpSec engineer these technologies to meet individual customer needs. These include switching imagery, movement within a stereographic image, multi-colour imagery and low contrast imagery

visible only from a specific angle. All of these technologies can be integrated into the following products:

- Hot stamping foils
- Pressure sensitive labels
- Hot and cold transfer films and laminates
- Holographic tapes and thread
- Demetallised hot stamping foils
- Tamper evident seals and enclosures
- Sequential numbering
- Overprinting

### Security Print Technologies

OpSec has in-house print capability for registration of the OVD with conventional print. The use of special inks is introduced when a number of different security features are required within a single document or product. These can include thermochromic inks, optically variable inks, chemical and optical taggants and tracers. All can be interrogated and authenticated using hand-held reading devices. The coatings of holographic materials themselves can incorporate both fluorescent and phosphorescent inks which can be replayed under special light sources:

- Up-converting inks
- Optically variable inks

### Secure Information Systems

OpSec is able to offer a proprietary Track and Trace service which utilises a sophisticated, interactive web-based facility. This operates in conjunction with a unique sequential numbering algorithm to allow full tracking of security products through both manufacturing and supply chains.

The system allows access by customers and investigators to comprehensive reports sorted by a wide range of fields. In addition, facilities are available for on-line ordering of products. Training and educational literature and programs are standard features of our service.

### Field Investigative Services

In co-operation with worldwide leaders in investigative services, we can provide a total security package.

### Consulting Services

OpSec provides specialist consulting services to develop specific security solutions for your document authentication needs.

### Educational Programs

In addition to the educational aspect that makes up part of our online Track and Trace system, OpSec is also experienced at offering stand alone multi-tiered educational programs.

These programs can take many forms and can include elements with varying levels of information, from point of sale posters and leaflets, cross-check verification cards through to in-depth security maps and detailed documents.

### Athens Olympics – Educational Program



## Banknote Protection



The first use of holographic OVD's on a banknote was in 1989 on an Austrian 1000 shilling. Since then this proven technology has been used on over 100 denominations worldwide including the simultaneous launch of 12 billion euro notes in 2000.

OpSec has supplied holographic products for bank notes for over fifteen years. Governments and central banks have audited our secure UK manufacturing facility that supplies security materials. In addition to supplying products for use as patches, stripes or threads in currency, we have undertaken technology transfer for government-owned bank note printers and their authorised institutions.

### Secure Transfer Foils

- Instant authentication
- Highly durable
- Suitable for patch and stripe application
- Easy release coatings for high speed printing and application systems
- Range of formulations for different paper substrates
- Engineered to meet the stringent performance requirements of multi-trip documents
- Capable of with standing all standard banknote durability and resistance tests
- Can incorporate highly specialised demetallisation to register, which enhances both security and aesthetic effects

### Banknote Threads

OpSec manufactures holographic materials for conversion to threads for use by the banknote printing industry. Our range of products utilises the latest optical imaging techniques and combines them with advanced materials science, thereby ensuring that customers receive the most technically proficient product range available today.

Our products are designed to withstand the extreme environment of mould-made papermaking machines and subsequent intaglio printing and still retain their optical properties in the final bank note.



## OpSec Revenue Protection System (ORPS)



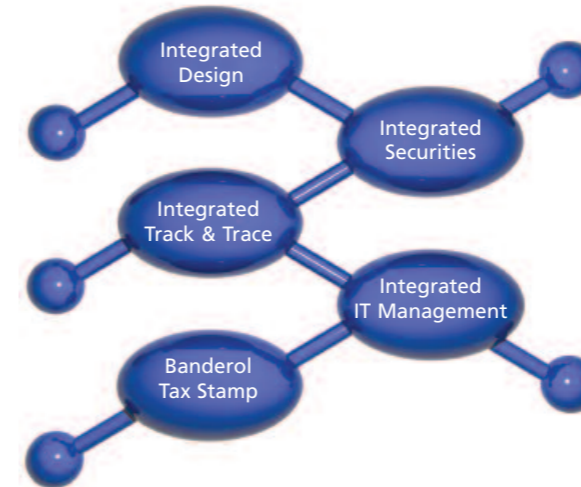
Governments globally fail to maximise the collection of revenues legitimately owed to them – especially on alcohol, tobacco and associated products – due to counterfeit articles, smuggled genuine goods and the lack of advanced systems to monitor and authenticate the circulation of genuine products.

### No Cost to Government

- Adoption of the ORPS program is at no cost to government or customs. The cost of the program is borne by manufacturers or importers bringing dutiable goods to the national marketplace
- All aspects of the ORPS program, including forensic examination service, data warehousing, data reporting, and Track and Trace service are costed into the price of the tax stamp which is paid by the manufacturer or importer

### Multiple Technology Platforms

- The ORPS program works by utilising multiple technology platforms including high security printed tax stamp banderol / labels, advanced optically variable security devices, state-of-the-art data warehousing and secure Internet web sites for 24/7 real-time data access for authorised government and customs officials
- The system package includes training of Enforcement Agency personnel, public awareness material and equipment to detect counterfeit banderols / labels



### Minimising the Risk of Counterfeiting

- The banderol / labels products used in the ORPS program contain high levels of security for protection against counterfeiting, and are designed to create a layered defence using overt, covert and forensic security devices
- The security print is on multiple levels allowing easy public recognition of the genuine article and fast authentication by front line inspectors. The covert security features are designed to allow fast forensic authentication of products which are suspect
- Subject to local law, the forensic test results and analysis used in the ORPS Program may be admissible as evidence in a court of law

### Transparent system

- The real-time database administered and managed by OpSec provides government and customs with total system transparency including full details of which tax stamps have been manufactured and their status: in warehouse stock, in transit to customer, delivered to customer

- Dependent on the detail supplied by customs to OpSec with each order despatch instruction, the real-time database will provide regular data reports to customs and the Ministry of Finance. The type of reports and their contents are by agreed between OpSec and government

### Enhanced Enforcement

- The database administered and managed by OpSec also provides enforcement officers, in real-time, with the ability to Track and Trace any tax stamp giving full details of which tax stamp products have been delivered to which companies and on which dates

## Identity Solutions

OpSec security products protect passports, drivers' licences, national ID cards and other personal identity documents from counterfeiting and forgery. We supply over 40 national governments around the world with security solutions for identification and registration, as well as both the US federal and state governments and a range of state and commercial security printers.

OpSec security products protect and authenticate ID products in some of the world's most sensitive installations and environments, where the need to establish and verify identity is paramount. OpSec is also a supplier of security components to the industry.

### Proven Solutions

- Passports
- Visas and immigration documents
- Driving licences
- Firearms certificates
- National ID cards
- Voter ID cards
- Birth, marriage and death certificates
- Vehicle registration systems



### Passports

OpSec offers a range of technologies to authenticate the validity of passports and secure them against tampering or alteration. These range from security laminates and secure paper solutions to RF and chip-based authentication features.

OpSec produces a full range of high security products that can be integrated into the latest ICAO machine-readable travel documents. These include pressure-sensitive, custom manufactured labels, high security thin film laminates and high security hot stamping foils. The optical images can be supplied fully metalised or HRI coated. The product can be integrated on most modern passport production lines.

OpSec works directly with governments worldwide, and with secure integrators, to ensure that our solutions are both cost-effective and can be used in conjunction with a wide range of issuance systems.

### Driver Licence and ID Card Security

OpSec supplies a range of protective overlaminates and secure card stock for a large number of national and federal drivers' licence programs as well as national ID schemes.

Security features include: transparent holographic OVD's, security print and our proprietary range of liquid crystal technologies.

- Absolute protection of personalised information with 10 year card lifetime
- Security features add authentication
- Durability enhanced, dye-migration and fading eliminated
- New embedded security features also available
- Laminates and pouches provided in format usable by all major producers of licences and ID cards

OpSec ID Technologies offer these key benefits:

- Recognised technical expertise and innovation
- Manufacturing facilities approved to APACS standards
- Longstanding supplier relationships with government departments, state security printers, central banks and law enforcement agencies.
- Close collaboration with manufacturers of security papers and threads, foil application systems and integrated passport and ID implementation systems
- Ease of application
- Customer service provided worldwide



## Payment Instruments



As an approved APACS and SWITCH supplier, OpSec has been providing security and authentication technologies for use on plastic cards and cheques since 1987.

OpSec is now an internationally recognised leader in the development and implementation of cost-effective security solutions to protect the authenticity of documents of value.

In reaching this position, we have become a longstanding supplier to high security printers, blue chip customers, central banks, government departments and national transport authorities.

The key to the successful protection of bearer and value documents is the combination of sophisticated optical features with innovative materials.

In meeting the need of issuers of documents worldwide, we have developed security solutions which:

- Combat forgery and counterfeiting
- Protect against alteration of data
- Allow immediate authentication

### Proven solutions

Our wide range of security technologies are currently being used to protect currency, checks, vouchers, bonds, transport and event tickets, payment cards, fiscal stamps and government identification documents around the world.

## Documents of Value

OpSec utilises a range of security-providing techniques and verification technologies to ensure the legitimacy and integrity of documents of value.

OpSec is able to provide both fully printed secure documents or component elements to security printers for a range of applications.

- Share certificate
- Examination certificates
- Title deeds
- Bonds
- Transport tickets
- Event tickets
- Ballot papers

Applications for comprehensive national vehicle ID programs, or for secure temporary licence plates, registration decals and parking placards.

- OVD's incorporated into decals and labels
- Tamper-evident layers to prevent unlawful transfer or alteration of information
- Write-resistant overlaminates also prevent alteration
- Vehicle inspection certificate
- Emissions testing



## Other Activities

### OpSec Brand Protection

A dedicated business unit has been created by OpSec to focus exclusively on delivering advanced brand protection management systems for Fortune 2000 companies. For 18 years OpSec has designed, developed and implemented sophisticated Brand Protection systems. These incorporate state-of-the-art OVD technology, covert marking technologies, serialisation coding system, supply changing security software and Internet Monitoring applications. Our impressive client base comprises over 150 companies including boutique brands as well as many of the Fortune 500 brands.

OpSec adds another layer of brand protection capabilities with BPMS (Brand Protection Management System). This innovative, web-based dashboard provides customer companies with a convenient, centralised system to monitor and manage their Internet and physical supply-chain brand security efforts.

- Relevant brand protection news by industry
- Monthly content that explores significant issues and trends
- Links to related associations and listings for upcoming trade events
- Intellectual property legislation and related case analysis
- Industry-expert blogs, user discussion boards and chat rooms



3DCD is a pioneering joint venture between OpSec Brand Protection and Technicolor that provides unparalleled anti-counterfeiting solutions for CD and DVD discs.

The secure Inner Mirror Band™ and Edge-to-Edge™ products are technological breakthroughs that incorporate a hologram into an optical disc without any loss or distortion of data.



### USA

Denver, Colorado  
 Parkton, Maryland  
 Lancaster, Pennsylvania  
 Boston, Massachusetts

Corporate Headquarters and 3DCD Support Office  
 American Headquarters and Sales and Manufacturing Facility  
 Manufacturing Facility  
 GenuOne Inc. Headquarters

### UK

Washington, Tyne & Wear  
 Grove Park, Leicestershire

European Headquarters and Manufacturing Facility  
 Optical Laboratories

### Sales Offices

Hong Kong  
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Proven by Experience.

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