

Brighterion™

Keeping an eye on your business™



Why iPrevent is Unique

There are several critical characteristics of fraud, such as continuous behavior changes, exponential growth rates, unpredictability, advanced fraud techniques, etc., that when addressed by the proper technology, can be successfully curtailed. However, the present generation of fraud solutions are based on methods that do not efficiently respond to these characteristics and certainly cannot respond to the constant changes in the fraud world.

Most fraud will result in a loss if it is not detected before the crime is committed. Criminals are continuously adapting their techniques as well as conceiving intricate fraud schemes. Without a smart and adaptive fraud prevention solution in place, fraudulent transactions can thrive indefinitely.

Current Generation of Fraud Products are Ineffective

Detecting and preventing fraud is a dynamic and continuously evolving process. Therefore, current solutions based on Neural Networks, Business Rules, Data Mining, Statistics, SVM and Bayesian Networks are not suited for preventing fraud because:

- Even though each merchant has a unique activity pattern, these technologies apply the same logic for all merchants!
- Even though each cardholder has a unique spending pattern, these technologies apply the same logic for all cardholders!
- Even worse they are outdated as soon as they are released because they lack the ability to adapt to new fraud schemes.

The limitations of algorithmic programming are best explained in an example. For instance, you cannot ask a financial expert to predict all events that may occur during a day, a month or a year. There are too many variables to code. Business problems requiring a minimum amount of reasoning cannot be transcribed into an algorithmic form. This is also true of programs based on Business Rules, Data Mining, Bayesian Networks, SVM, Neural Networks, OO languages, etc. In the case of:

- **Business Rules**, you must predict these possibilities by writing all possible rules (*obviously impossible*).
- **Data Mining**, you must generate a decision tree that takes into account all possible cases (*obviously impossible*).
- **Neural Networks**, you need to have access and train your system with all possible patterns (*obviously impossible*). Unsupervised neural networks (clustering) are inefficient and

inadequate.

- **Object-oriented languages**, you must foresee, know and program all possible methods (*obviously impossible*).

Brighterion's Advantages

iPrevent, Brighterion's adaptive real-time fraud prevention product is the result of over 500 man-years of research and development. In contrast to current static anti-fraud products, Brighterion's iPrevent solution is uniquely self-adaptive. The comprehensive intelligence built into iPrevent allows the customer's model to gather intelligence and incrementally learn as transactions occur.

Dynamic Adaptation Maintains Continuous Accuracy

Brighterion is a pioneer in the development of Smart-Agents technology and is the only company to apply it to a commercial anti-fraud solution. In Smart-Agents technology, by contrast to supervised models where the system needs to be trained with previous fraud schemes, multiple independent agents interact and negotiate with each other in order to detect any new abnormal behavior.

Compared to other fraud solutions based on neural networks, business rules, SVM, Bayesian networks, statistics, or data mining, which evaluate financial transactions using the same logic for all cardholders and merchants, iPrevent uniquely evaluates behaviors specific to an individual cardholder or merchant and is therefore, the only product on the market with the ability to identify and stop in real-time new fraud schemes (previously unknown fraud).

Brighterion's patented technology suite includes ten artificial intelligence technologies that work in unison to deliver a collaborative result that is significantly more accurate and unparalleled in the industry.

iPrevent's Advantages:

1. Adaptive real-time fraud prevention (*Acquirer, issuer, prepaid, credit, debit, corporate, checks, mobile, etc.*), compromised account detection and delinquency prediction for Financial Services, Retailers, Healthcare, Insurance and Mobile Payments.
2. Automatic Model Creation.
3. Process Transactions in Real Time: 2700 transactions per second (with less than 50 ms) with just one mid-range level server such as the Sparc Model M4000.
4. Models created automatically can be enhanced with iPrevent Business Rules Management

System (Web based and easy to use by non IT business experts).

5. Easy to Integrate: TCP, ISO8583, Euronet, Web Service, etc.
6. Gives total control to the user.
7. High Scalability: Process in real-time over five billion transactions per month with just one mid-range level server.
8. Highest detection and lowest false positive rates.
9. Evaluates behavior specific to an individual cardholder and/or merchant.
10. Identifies suspicious new fraud (previously unknown fraud) schemes in real-time.
11. High Availability: 99.999% operational availability guaranteed - no software downtime.
12. High Level Security: All models and data exchanges are automatically encrypted.
13. Full traceability: All the activities are monitored.
14. Provides detailed explanation of scoring.
15. All Inclusive Web based case management system to enable investigation & decision making.
16. Self-adaptive and learning models: iPrevent models learn and make effective changes at runtime. iPrevent models are updated without any programming.

Analogy Between Human Immune System and iPrevent

The human immune system produces antibodies to protect the body from known and unknown ailments; iPrevent produces "antifraud counter measures" to protect your business from known and unknown fraudulent activities.

The analogy between the human immune system and iPrevent illustrates the software's functionality. Human immune systems protect the body from many known ailments by automatically adapting to new and unknown dangers by dispersing millions of white blood cells. Most importantly, it creates antibodies to protect the body with knowledge from previous illnesses. This is the framework on which iPrevent operates ...It self-adapts to protect your business.

iPrevent is used, in real-time, to prevent acquirer and issuer fraud , credit, corporate, debit and prepaid card fraud, check and mobile payment fraud. Additionally, iPrevent is successfully used for compromised account detection and delinquency prediction by financial institutions, insurance companies, retailers, healthcare and mobile payment providers.