



# DataDot Technology Limited

ACN 091 908 726

## Stock Exchange Announcement

*22 March, 2006*

### DataTraceDNA – Business Update

#### **FIRST AUSTRALIAN CUSTOMER**

DataDot Technology Ltd (“DDT”) in conjunction with its partner CSIRO (Australia’s Commonwealth Scientific & Industrial Research Organisation), is pleased to announce that their joint venture company DataTraceDNA Pty Ltd (“DataTrace”) has concluded a commercial agreement with its first Australian customer for polymer (plastic) authentication.

Under the agreement DataTraceDNA will be applied to exported plastic components that are manufactured in one of the most advanced facilities in Australia. It is essential that these components are able to be authenticated as genuine items in their end use. DataTraceDNA was selected for this purpose because it met the manufacturer’s requirement for assured authentication, durability and invisibility.

#### **EXPANSION OF R&D PROGRAM - NEW INDUSTRY SOLUTIONS ANNOUNCED**

A US Chamber of Commerce study released in March 2006 estimates that the global counterfeiting industry will grow from US\$500 billion to around US\$2 trillion in the next twenty years.

To meet this demand DataTrace has already developed high security authentication solutions for major industries such as paints, polymers and paper and packaging. These are outlined in detail below.

Following successful proof of concept testing, DDT is now pleased to announce that DataTrace has expanded the range of solutions to include metal marking, fibre authentication, explosives authentication and control of mixing of concrete. Management of concrete mixing alone has the potential to revolutionise quality control in one of the world’s largest and most important industries.

Each of these solutions solves very significant business problems that currently cost industry many hundreds of millions of dollars in Australia and billions of dollars in larger economies. Each solution is also an extension of the CSIRO’s existing patent-pending technology for



covert authentication to protect against counterfeiting, illegal substitution and bogus warranty claim, or of its mixing patent.

For the first time manufacturers can source from a single supplier a molecular barcode that can be incorporated into, or applied onto, virtually any manufactured or naturally occurring item.

This unique capability means that owners of valuable brands and designs can prove the origin of an item in the field using a portable digital scanner. The scanner, known as the DataTraceDNA Authenticator, is a sophisticated device capable of instantly recognizing whether a product is authentic or is an illegal copy. The Authenticator can also be adapted to determine when bulk materials such as concrete or paint are thoroughly mixed.

### **TECHNICAL TESTING CONTINUES WITH GLOBAL MANUFACTURERS**

DataTrace's mission is to provide solutions to some of the biggest problems facing industries today using a heritage of world-class inventions developed by Australia's CSIRO.

DataTrace is currently engaged in technical due diligence with some of the biggest and best known manufacturers of paints and polymers in the world based in Asia, Europe, the Middle-East and North America. During March and April 2006 DataTrace will be performing detailed technical testing at the request of several of these manufacturers. These organizations are all targets of counterfeiting and illegal substitution leading to bogus warranty claims.

### **CONCRETE INDUSTRY**

The concrete industry, one of the world's largest and most important, will soon have an entirely new method for determining homogeneity, or uniform mixing. This is currently a massive problem for the industry resulting in huge remediation expenses. When concrete is not correctly and thoroughly mixed it results in reduced strength and longevity, the results of which are often seen in the form of road crews repairing freeways and construction crews shoring up older reinforced concrete buildings. The DataTraceDNA Concrete Homogeneity Solution enables the material to be checked in both a wet and dry state. Even after 10 years or more it will still be possible to verify both the origin and quality of the mix.

In Australia each year around 50 million cubic metres of concrete are produced with about 30% of that volume being a candidate for the new DataTraceDNA Homogeneity Solution. The worldwide production of concrete used in high-rise buildings, pavements and freeways is measured in billions of cubic metres.

In NSW alone the Roads & Traffic Authority budget for remediation work is over \$600 million this year.

## **PAINTS & COATINGS INDUSTRY**

In the paint industry DataTrace is engaged in proof of concept testing with several global manufacturers to enable them to eliminate illegal warranty claims. Manufacturers of high quality paints are constantly fighting against illegal substitution by contractors who are increasingly creative in finding ways to maximise their margins. The other major cause of warranty issues relates to a failure to mix the correct constituent components thoroughly. The cost of these problems to each global manufacturer of quality paints is measured in the tens of millions of dollars annually. When DataTraceDNA is incorporated into the paint mixture the manufacturer is able to determine both the authenticity of constituents and the uniformity of mixing. This means that when a manufacturer is presented with a warranty claim it is instantly able to determine whether its coating was applied and if so whether it was mixed correctly prior to being applied.

High quality paints and coatings are typically specified for infrastructure assets such as steel bridges and expensive motor vehicles. The owners of these assets can now be assured that what appears to be the specified coating has in fact been used and correctly applied.

## **POLYMER INDUSTRY**

The polymer or plastics industry is one of the fastest growing in the world due to new techniques that produce plastics capable of performance levels usually associated with metals. But as well as being highly functional and highly-performing, plastics are subject to counterfeiting. To combat this major problem manufacturers are turning to molecular authentication from companies such as DataTrace. Molecular authentication of polymers means that the authenticity of products can be verified at any point in the supply chain and at any time during the life of the product. Our first Australian polymer customer is using DataTraceDNA to authenticate export plastic components for use in an industry where product authentication is critical.

## **PAPER & PACKAGING**

DataTraceDNA is ideal for use on paper and packaging by printing a small invisible patch using clear ink. In this way a manufacturer can authenticate a package and therefore its contents for a very small additional cost, even as low as fractions of a cent when large volumes are involved. DataTraceDNA is currently being considered to provide covert authentication for a national packaging project in Asia. By using the DataTraceDNA Authenticator in the field the client can identify fake products on the spot and immediately commence formal investigations based on the irrefutable evidence of DataTraceDNA.

## **FIBRE INDUSTRY**

DataTraceDNA has been successfully incorporated into fibre, thereby enabling mills and garment makers to include a secret form of authentication in their fabric and garments. This means that global brands and designers can now prove that their items are genuine and have a simple method to audit their supply chain and catch counterfeiters. With absolute confidence



they can now launch police investigations the minute they find a counterfeit item, rather than wait weeks for a specialist laboratory to determine whether a suspect garment is actually a fake. Production of fibre by major northern hemisphere weavers is in the thousands of metric tons annually. The DataTraceDNA impregnated fibre will be used by major global brands as a foundation form of protection against counterfeiters.

## **SPARE PARTS INDUSTRY**

The counterfeit spare parts industry is in growth mode, this year costing auto makers at least US\$12billion, as reported in March 2006 by the ICC Counterfeiting Intelligence Bureau based in Europe. Not only are original manufacturers robbed of this revenue by bogus parts but vehicle owners are unknowingly subject to serious safety risks. This is a problem not confined to motor vehicles. It is also prevalent in the airline industry, which emphasises the risks to which the travelling public are exposed. It is a problem that can be solved because DataTrace has now pioneered a method of molecular marking of metals post-manufacture, thereby enabling manufacturers to invisibly mark their parts and police the use of them throughout their supply chain. Using our portable DataTraceDNA Authenticator, a manufacturer's audit teams are instantly able to verify parts inventories at warehouses, logistics firms, service centres and retail outlets.

## **EXPLOSIVES INDUSTRY**

Everyone is acutely aware of the threat of terrorism and in particular terrorist use of explosives. It is far too easy for terrorists to make and detonate explosives and for law enforcement to have little if any chance of proving the origin of the materials. However, Governments now have the opportunity to legislate for the components of explosives to be tagged with technology such as DataTraceDNA so that law enforcement and forensic investigators can identify their source. By tagging explosives' components with DataTraceDNA it is possible to use our digital scanner either before or after a blast to confirm the origin of the materials.

Testing of our explosives marking system is concluding in March with the CSIRO monitoring a series of tests taking place in several official explosives ranges.

## **DATATRACEDNA DIGITAL READER IS A BREAKTHROUGH DEVICE**

The objective of the original DataTrace research program was to create a commercially viable product to solve the problems of counterfeiting and over-runs in mass production industries. The intention was to design a secure, portable, easy to use and instantaneous means of authenticating products, materials and packaging. The original design brief further stipulated that the DataTraceDNA solution must use mass production processes already existing within target industries in order to minimize production costs and avert potential resistance by manufacturers to the implementation of DataTraceDNA.

DataTrace achieved this target late in 2005 with the creation of the breakthrough D (demonstration) series Authenticators (readers) together with commercially feasible solutions



for polymer identification, packaging identification and paint and asset identification. The combination of molecular markers and sophisticated digital reader provides a solution for any manufacturer suffering revenue loss from counterfeit products, illegal substitution and bogus warranty claims.

## **THE DataTraceDNA AUTHENTICATOR DEVELOPMENT PROGRAM**

The D1 Authenticator operating in tandem with a suitably programmed laptop computer produced a secure, rapid, easy to use, field portable means of authentication, by reducing several square meters of high powered and potentially dangerous laboratory grade lasers, optics and electronics to a machine the size of a laptop. Though the D1 was designed primarily as a demonstration unit, the breakthrough in design meant that it was able to operate commercially in a number of applications.

The D2 Authenticator, released in January 2006, took the mechanics of the D1 Authenticator and added an internal processor to create a fully portable and self contained reader. The D2 Authenticator also introduced a breakthrough processing system that will be the basis of all future DataTraceDNA readers.

The D3 Authenticator, scheduled to be in operation in mid-April 2006, takes the development of the DataTraceDNA reader to another level. The D3 design is at the leading edge of technology, utilizing breakthroughs in electronics that only became available in late 2005. The D3 innovation will create an Authenticator that can be held in one hand and will not only out-perform all previous Authenticators but also the original high powered laboratory bench systems used at the CSIRO.

## **SOLUTION OBJECTIVES**

DataTrace is fully capable of authenticating virtually every manufactured item and, using its spray product, can also authenticate naturally occurring items. The company provides proven solutions in a world where counterfeiting and illegal substitution have become some of the biggest business challenges faced by manufacturers.

While these problems have always existed, recent advances in mass production and the nature of contract manufacturing by big international brand owners have taken counterfeiting and over-runs to a level where they are seriously damaging many mass production industries. The advent of DataTraceDNA was timely as the problem of counterfeiting and overruns is accelerating and at an increasing rate. The penetration of counterfeits into pharmaceuticals, aviation and automotive components is now posing a serious risk to life.

The original objective of DataTrace was to investigate the potential of both current and imminent technology to determine if it were possible to create a commercial product to solve the problems of counterfeits and over-runs. The intention was to design a secure, portable and easy to use, instantaneous means of authenticating products, materials and packaging, using technology that had been previously confined for reasons of cost and portability to the production of banknotes.



The design brief further stipulated that the means of incorporating DataTraceDNA into an industry must use processes that exist within that target industry, in order to minimize production costs and to avert potential resistance by manufacturers.

DataTrace has achieved that original objective to a very high degree.

## **PATENTS**

DataTrace filed two patents in 2005, one for its authentication systems and the other for a spin off technology to measure instantaneously the degree of homogeneity of an industrial mixing process.

The latter technology promises to revolutionize many industrial production systems, including paint and concrete manufacture. In the case of concrete, it is expected that the system will supersede the existing Australian standard for determining homogeneity.

DataTrace is now preparing to file a third patent which describes a revolutionary low cost means of authenticating metal. This technology is destined for the aviation, munitions, automotive and sports good industries.

## **SUMMARY OF CURRENT DATATRACEDNA INDUSTRY SOLUTIONS**

For polymers, paints and packaging, DataTrace has created commercial products to solve the problems of counterfeiting and over-runs. As per the design brief of DataTrace these solutions make use of pre-existing production processes within the target industries.

### **Polymers**

For the polymer (plastics) industry, DataTraceDNA is sold as 'master batch'. This is the polymer industry standard for introducing materials into polymers and it means that the incorporation of DataTraceDNA is cheap, simple and easy.

This DataTrace solution is currently in production.

### **Packaging**

DataTrace has developed a means of authenticating packaging that is amazingly simple and low cost. DataTraceDNA for packaging is supplied in the form of a transparent ink.

This DataTrace solution is in production.

### **Paint**

DataTraceDNA is quickly and simply mixed in with other materials during the manufacture of paint.



This DataTrace solution is currently in pilot production.

### **Asset Identification Paint**

DataTraceDNA is sprayed onto an item to be authenticated using the DataTraceDNA authentication spray.

This DataTrace solution is currently in production.

### **Metal**

The low cost, high security and easy to use nature of the DataTrace metal authentication system provides for a revolutionary authentication solution for the aviation, munitions and automotive industries. DataTrace was able to develop a breakthrough technology that did not interfere with the alloy or crystal structure of metal.

Filing of the patent for DataTrace's low cost metal authentication system is imminent.

### **Fibre**

DataTrace has produced a high security authentication fibre for the textile industry for the purpose of authenticating high-value textiles. DataTraceDNA fibre, read by the DataTraceDNA Authenticator will revolutionize the textile industry by enabling instantaneous field authentication of garments, fabrics and yarns.

This DataTrace solution is currently in pilot production

## **About DataDot Technology Limited (DDT)**

DDT is a leading asset identification company, with expanding global operations. DDT has invented, patented and commercialised DataDotDNA, an asset identification technology that provides greater asset security, proves authenticity of product, assists in proving ownership, and acts as a deterrent to thieves. In partnership with the CSIRO, DDT has also developed and is commercialising DataTraceDNA, a unique luminescent marker for bulk materials.

The DataDotDNA technology has gained acceptance around the world and is currently sold in Australia, UK/Europe, USA, Canada, South Africa, Indonesia, Taiwan, Hong Kong, China, New Zealand, Russia, Romania, and Poland. DataDotDNA customers include a number of major vehicle suppliers in various regions including Audi, Nissan, BMW, Subaru, Ford Performance Vehicles, Porsche, Holden Special Vehicles, Mitsubishi, Toyota and Honda.

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