

The Count

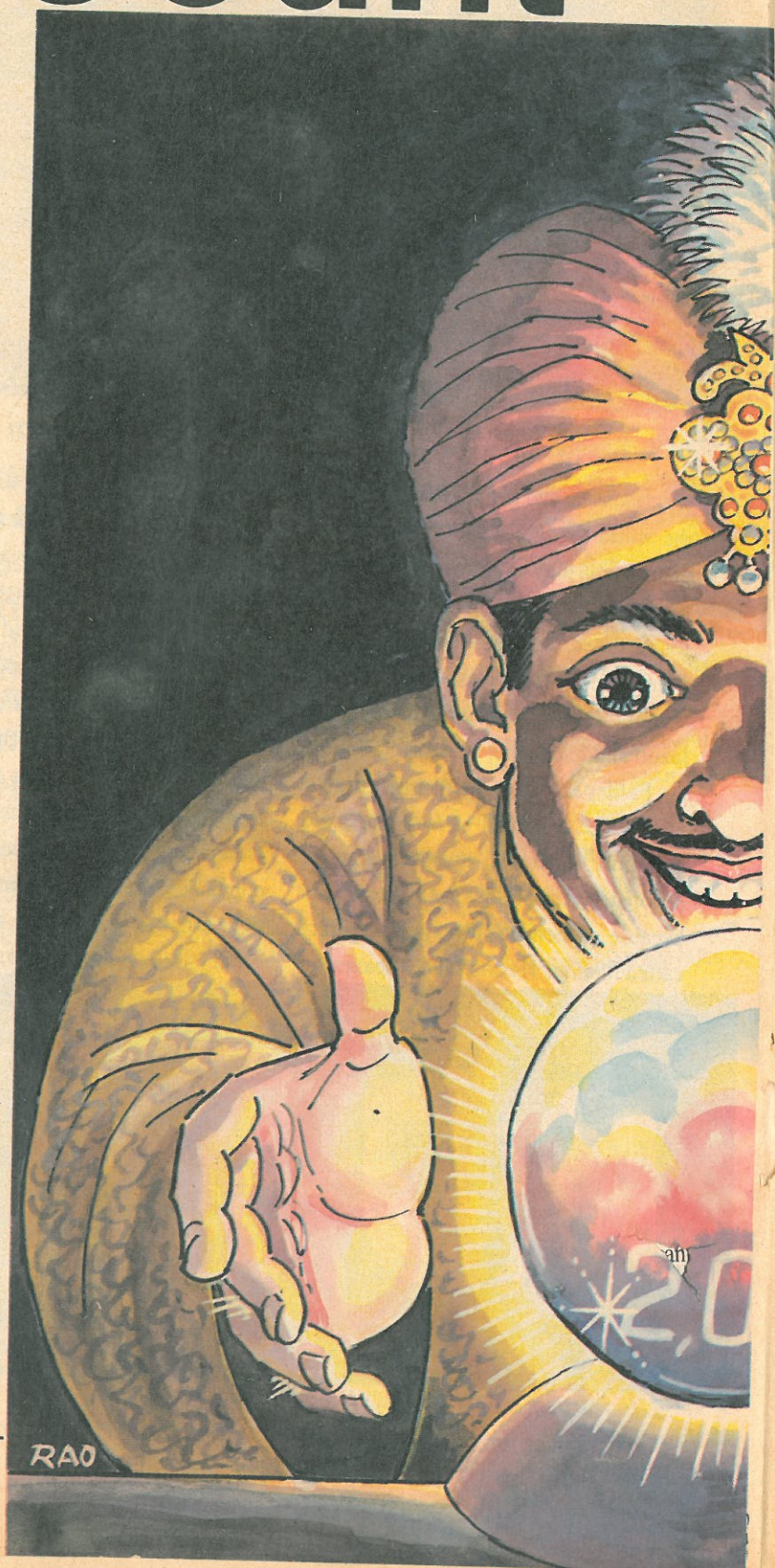
As the 21st century is fast approaching, the world is readying itself to face the challenges of the next millennium.

In a series of articles, we will be featuring the technologies which will matter the most in the next century

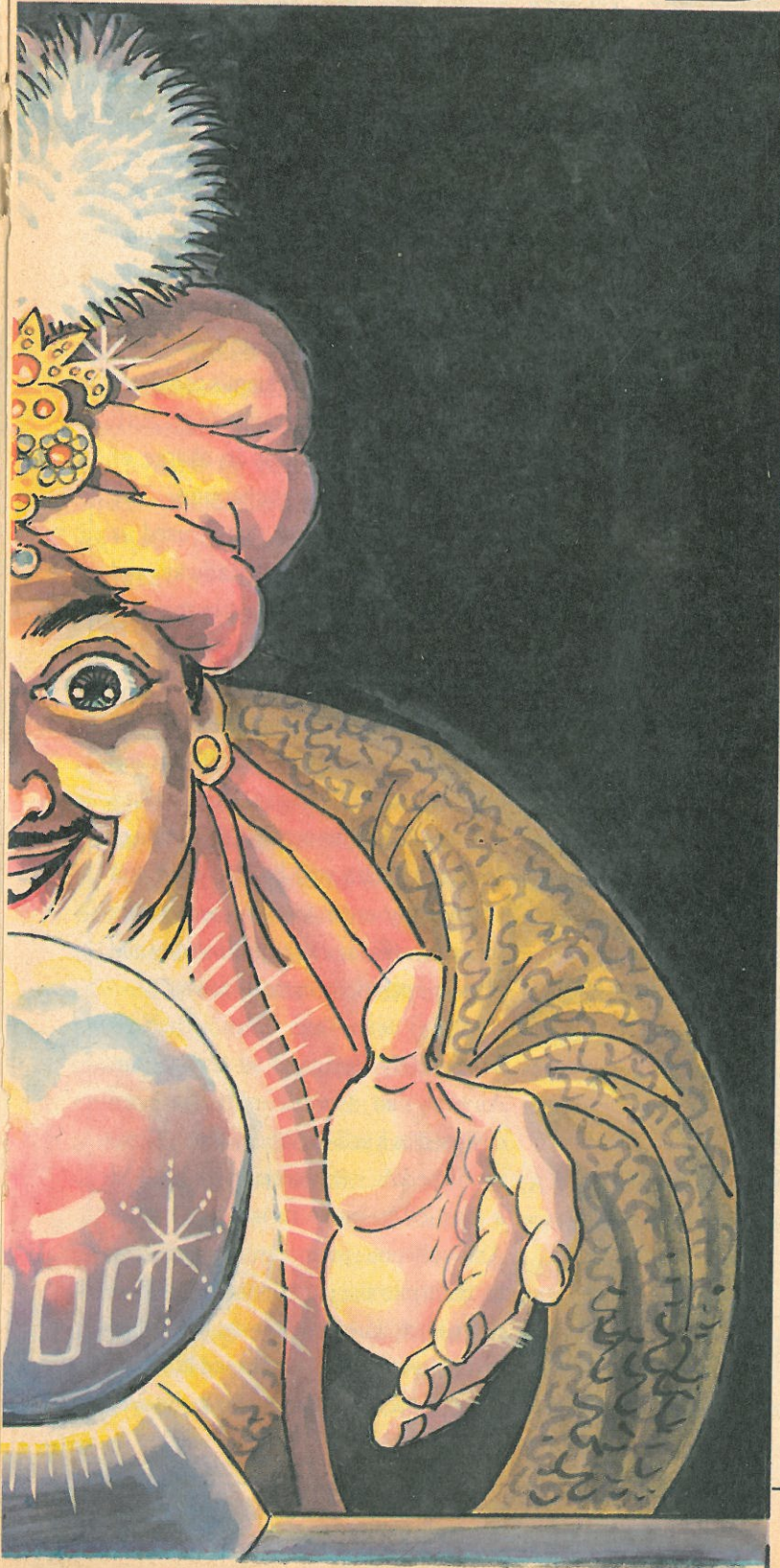
■ G.P. Vinayababu

With precisely two years and nine months left to reach the magical figure of year 2000, the latest buzzword on everyone's lips is the millennium readiness. People from all walks of life are preparing themselves to meet the demands of the next century. While businessmen are busy making strategies for the future, the industrialists are gearing themselves up to face the challenges at the turn of the century. The politicians are adding liberal doses of 21st century promises in all their speeches.

There are no prizes for guessing who will be ruling the world in the next century. Technology which virtually



down Begins



dictated the progress in the 20th century will once again be the driving force in the next century. A look back at the greatest achievements of the century will reveal that the technological growth has been phenomenal as the years have passed by. Starting of with the invention of aeroplane in the first decade of the century, space walking midway through moonlanding in the late 60s to the discovery of life on Mars with conclusive evidence recently, man's unrelenting efforts to understand his surroundings has yielded astonishing results. With the application of his advanced scientific knowledge, life is getting more comfortable for him. But what is in store for consumers? How will technology help them get the best value for their money? What are the consumer aspirations?

Consumerism in India

The world which was production driven a few decades ago is now totally consumer driven. The idea of 'You buy what we make' is no longer accepted. Now the standard phrase is 'We make what you buy'. This has been possible with an extensive use of technology in the manufacture of all goods.

Almost all consumer goods have been able to achieve massive reduction in price/performance ratios. Be it Televisions, refrigerators, washing

The mini cars for tomorrow

Lively and vigorous are the key words when it comes to the latest small car from Ford - the Ka, named after the Egyptian symbol for vitality. The futuristic model is being promoted by Britain's top-selling motor manufacturer as the Mini for the next millennium and 200,000 Ka's are in showrooms across Europe.



transmission system - the Ka goes from zero to 60 mph (zero to 96.5 kph) in 13.8 and 14.3 seconds, respectively and has a top speed of 96 mph (154 kph). Emission controls are provided by a close-coupled, closed-loop, three-way catalytic converter with oxygen sensor and meets with the 1996 European Union Emission Directive.

should become operational by next year. Several cities have already expressed interest in it as it is undeniably a very appealing answer to the problem of increasing pollution and vehicular traffic in cities.

This fully operational car includes a GPS positioning system and a digital system communicating with the management station. INRIA engineered all the information technology on board this car as well as the system's computer management programming. EdF (Electricity Board) was in charge of designing induction recharging. The same contactless card that is used as transit pass for the French Railways and Transport networks is used in this too. In short, everything should be ready very soon.

Its fuel usage with unleaded gasoline, 95 (RON), in the "extra urban" category is 58.9 miles per gallon (mpg) - (about 20.8 km per litre (kpl) - for the manually steered model and 51.4 mpg (about 18.2 kpl) for the model with power-

Camera Press

assisted steering. Combined new urban and extra urban figures are listed as 47.9 mpg and 42.2 mpg, respectively - roughly 17.1 kpl and 15 kpl.

On accessories, Ford decided to focus on safety and security: the Ka features driver's airbag, high-security locks, a crumple-safe chassis, foam-filled doors to cushion against side impact and a larger steering wheel for easy parking. The standard specification for each series can be upgraded by a number of customer choice options.

While Britain is developing KA, neighbouring France is bringing its own car for 2000.

Praxi, a self-service car, was engineered by the French Institute for Research on Computers and Automation (INRIA). With it, driving becomes very easy: a joystick is all that one needs! It

The testing budget amounts to about 30 million French Francs for 50 cars and 6 parking lots. Testing is slated to last a year and half. During that time, a huge amount of data will be compiled and assessed by order to examine how the service works, assess its profitability and plan its operations in many towns.

Praxi was thus born. It was deliberately designed as a slow car. Anyone can drive it as it has been designed as a self-service vehicle. There are no pedals, nor a steering wheel. Just a joystick to move forward and steer. Anti-collision systems are soon going to be built into the car so that it can slow down if anything is in its way. It will thus revolutionise our behaviour and life-style bringing back a certain quality to the over stressed city life.

The three-door Ka is 3.62 m (11 ft.) long (overall), boasts a 1.3 litre engine and is expected to retail for £ 7000.

It was designed at Ford's studio at Dunton, Essex, southeast England, by Chris Svensson, aged 30, a graduate of Britain's Royal College of Art. He says he simply drew what he wanted to drive and the design sprang from there. The Ka has been designed to be fun and exciting to drive, as well as offering the sophistication and features normally associated with larger vehicles. Emphasis has been put on its feminine appeal - the back seat divides into two and folds flat, offering extra room for both shopping and children. Front headroom is 0.99 m and legroom is 1.03 m.

Available in two series, Ka and Ka 2 - but with one body style, engine and

machines, music systems, coolers, two-in-ones, VCRs, mixers, air conditioners, vacuum cleaners etc., all have benefitted immensely from technological growth.

Here is an example of what technology can do for the consumer market. Technology directly helps in the mass production of quality products. That gives rise to several brands which, while making use of the proven technology, also provides value additions. With more brands, value addition and better servicing, the consumer will get more benefits. Again if a consumer manufacturer has to remain in business he should constantly be on the lookout for better technologies, which will offer that extra advantage over his rivals. The companies spend quite a fortune on their research and developmental activities precisely for this reason. SONY is an excellent example of how a company making use of the latest technology and keeping consumer needs in mind has been able to grow into one of the biggest consumer electronic manufacturer in the world.

With the average man today well informed about the new developments through internet and various other infomedia, it becomes that much more difficult for the consumer good manufacturer to live up to the consumer expectations. This will infact be fiercer in the next century. Moreover the brand wars have added fuel to this.

Take for example the Television manufacturing sector in India. When Videocon introduced high definition sound system into its television, Phillips responded with a flat screen television. BPL was not far behind with the

Parking Space Management System

This system fills car park spaces logically, automatically directing drivers into available spaces by the best possible route. When a driver reaches the entrance barrier, a detector triggers the system to automatically allocate a space according to a predefined program. The parking space "address" is printed on the ticket and displayed on a variable message sign. Alternatively, drivers can be guided by direction system to available parking spaces. Entering a reserved space activates an alarm and alerts the operator.

introduction of woofer sound technology. India is slowly realising the importance of adopting new technology to remain in contention. Native companies who had a tough time countering the influence of foreign companies is now getting along quite well in various sectors.

India's socialist approach proved detrimental to the Industrial and technological growth in the country after

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its independence. India restricted the entry of foreign companies into the country arguing that it would affect the growth of native industries. With the doors virtually sealed for anything foreign, Indian consumers were deprived of buying the best in the world. It only made our Government funded public sector industries grew into huge loss making concerns. The government's aversion to foreign entry obviously didn't prevent Indian consumer from getting what he wanted. Anything with the 'imported' tag was considered to be the best - in fact it was so. Smuggling thrived and the best of the western goods were available in India. Phillips, Panasonic, Sony etc. became household names. This had to stop somewhere.

Stopped it did at the beginning of the 90s with the first Non-Gandhi family Congress Prime Minister assuming office. The economy was opened-up and foreign companies were allowed to establish branches and manufacturing units in India. While most foreign companies found partners in India to establish their business ventures, some like Hyundai and Audi started off on their own. The phenomenal growth in the automobile industry is an indication to the success of our free economic policies. Before the entry of foreign companies, India only had two to three car brands. Now the number has increased beyond twenty offering the best value for people's money.

During the socialist regime it was not that Indian companies never flourished. Big business conglomerates like Tatas and Birlas were competing with international brands. Only that their

Futuristic park at the Trocadero

The Trocadero, in the heart of London's Piccadilly Circus, has shed its former shopping mall image to become the world's largest indoor virtual reality theme park.

Tourists and locals alike can now enjoy stunning high-tech attractions at the pound 45 million Segaworld project that opened recently in the heart of the capital.

The design of the Trocadero's Segaworld theme park (pictured) is based on the idea of a 21st century space "mothership". As visitors step through

the doors they are transported into a futuristic world.

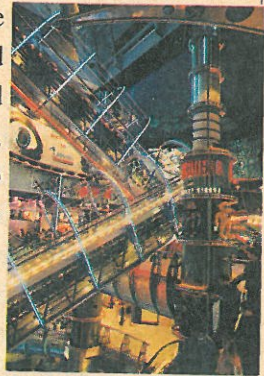
The UK's longest rocket escalator launches visitors into Segaworld. Boasting seven floors of the latest in virtual reality rides, it is expected to attract around 1.75 million visitors in its first year alone.

Open from 10.00 till 24.00, the Trocadero promises a new experience for all ages. As well as housing special effects galore the Trocadero is home to Madame Tussaud's Rock Circus and theme restaurants such as Planet

Hollywood, the Rock Island Diner and Thunder Drive, which also becomes a club venue at night.

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efforts went unnoticed. With the liberalisation of our economy, many of these companies came face to face with the best in the industry and realised their position.

There was one great beneficiary with the entry of foreign giants - the consumer. He not only got a wide range of choice

but at the same time got the cost advantage. A perfect blend of technology and quality made Indian companies like Maruti and Titan get wide acceptability both in India and abroad.

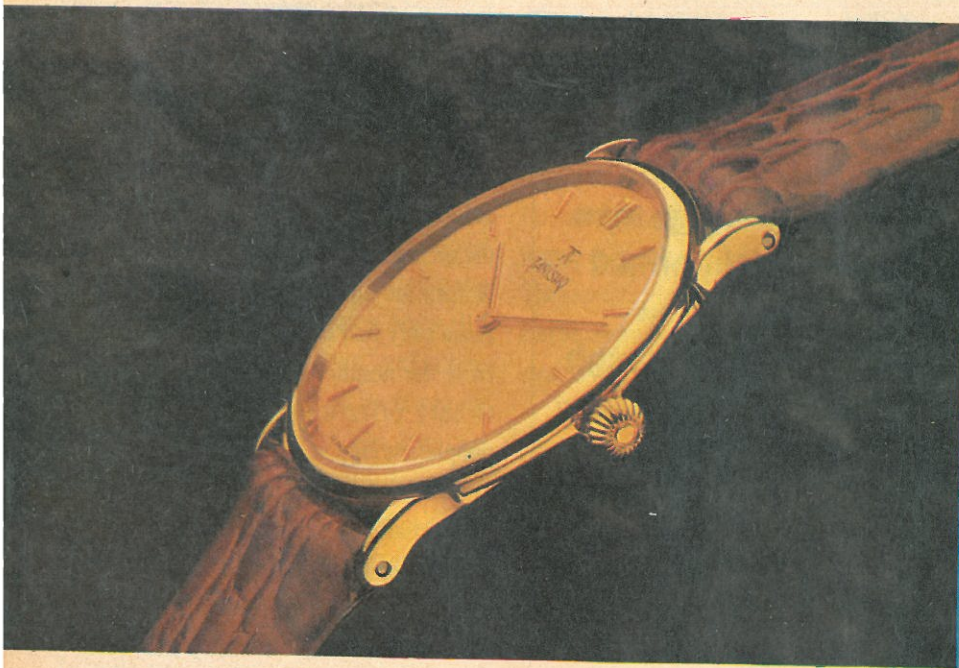
Titanic effort

It is worth mentioning here the phenomenal success of TITAN as a

Photo Sensitive Electric Lights

A new series of light sensitive switches can be used for the automatic control of driveway lamps, advertising display lighting and similar systems. These devices have a capacity of 200W, at 220/250 volt, and of 100W at 110/150 volt. Power is turned on automatically when the intensity of incident light goes down to 15LUX; it is again switched off when 75LUX are reached. These parameters meet the requirements of almost all small outdoor lights. Two built in features are design to protect equipment and to extend the life of metal vapor light bulbs, namely, a delay of about ten seconds, before switching on or off. Thus the system is insensitive to incidental and short lived changes.

Israeli News



TWENTY FIRST CENTURY TECHNOLOGIES

watch manufacturer. Combining the best of French design, Swiss precision, German / Japanese technology and Indian artistry TITAN has assumed an enviable position in the world market.

TITAN's 'New World Watch' range which has blended the best of precision technology in the world has made an impact as the best watch for all occasion and all age groups in Europe, besides establishing the first successful Indian brand in the foreign soil. Now it is all set to storm the US market.

What is the secret behind TITAN's success?

Ofcourse the technology edge. Its precision and consistent quality is attributed to the high technology research carried out in TITAN industries. TITAN team creates one new case every week creating 3D modelling using CAD stations. This enables creative freedom.

Coupled with the high performance CAM machines, TITAN is able to produce the best. TITAN which is going so well obviously doesn't want to rest on its laurels. Mr. Xerex Desai has an ambitious plan for the future. By the year 2006 Desai will be heading the world's biggest and finest watch manufacturing industry. His future plans include the incorporation of advanced Quartz technology and combining the best watch technology with electronics to produce miniature products.

The growth has not only been in terms of consumer products but also in terms of managerial procedures and office automation etc.

We will be continuing its coverage of the latest and the best in technological developments in the future issues under the 21st century technologies.

Electric Pen

A ball-point pen containing an arrangement of sensors and connected by a tethered cable to a serial port of computer, which detect the hand movement used in writing. The company's software translates the resultant signals into meaningful text characters or number and as a by-product, allows verification and authentication of the person for secure electronic communication and point of sale transaction. The ball-point pen, like any other is capable of writing on plain paper. There is no need for a digitizer or any other special surface or device. The pen may be attached to a Memory Unit, a small portable device, which stores the signals for later download and interpretation.

Hail the 21st century Taxi

A new black cab, the first radical change in the world-famous London taxi in nearly a decade, was launched in October at the '1996 British International Motor Show' in Birmingham.

The new taxi still retains the tradition of the familiar black cab but makes full use of the latest engineering and production technology to create a metropolitan passenger vehicle for the 21st century.

The taxi will be more environment friendly, more practical to use and easier to drive than any other cab in the market. Although launched with a conventional diesel engine, it will be available shortly with a range of low-pollutant engine options.

'This new taxi is set to offer cab drivers and their passengers a safe, comfortable, clean alternative to the present vehicles and at a very good price', says Crispin reed, managing director of the Asquith Motor Carriage, the manufacturers. 'We are well advanced with the development of the prototype and hope to have production started within the next twelve months'.

A three-step strategy has been developed to move towards an effective pollution-free vehicle by 2000. In the first stage a low-emission, bi-fuel engined taxi - which will enable the driver to switch between petrol and compressed natural gas - will be available



Michael Dyer Associates

within two years.

The company is also working with Zeus Energy Ltd., on a hybrid electric version that will allow the vehicle to operate in restricted areas being considered by several British innercity authorities. The taxi has also been designed to ease wheelchair accessibility, that will be required by law in all public transport in two years' time.