

An introduction to Tronlink

TRONLINK

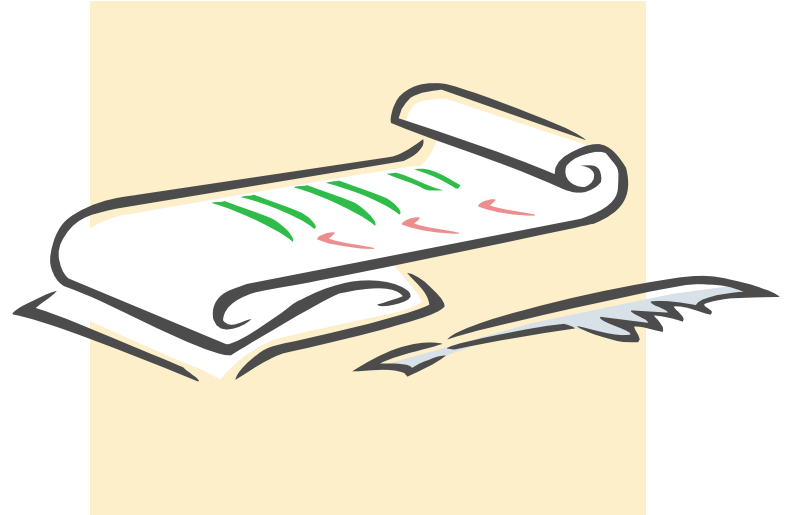
<http://www.tronlink.com>



崇林科技股份有限公司

Agenda

- **Company Overview**
- **Product Lines**
- **Operation Model**
- **Core Competency**
- **Customers**
- **Our Technologies**





About Tron Link

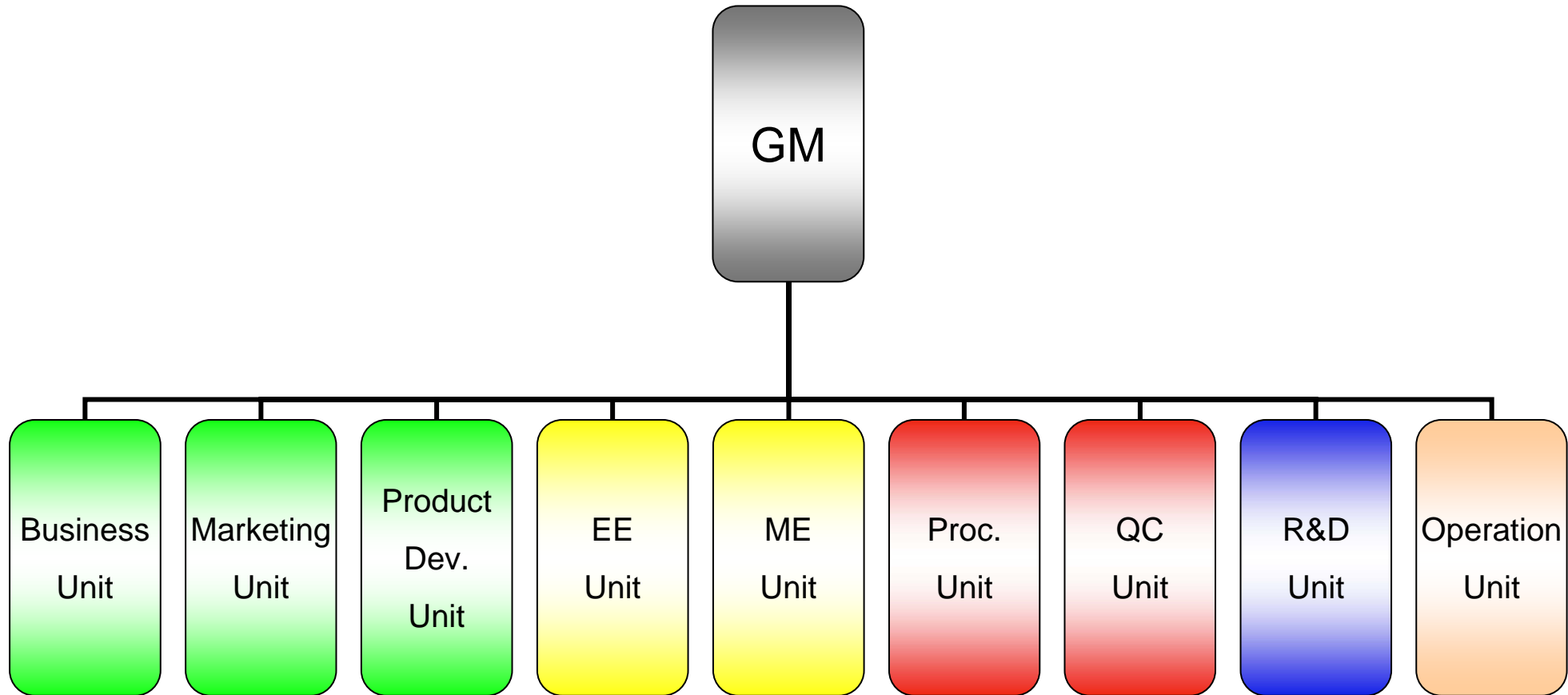
- Tron Link Technology Co., Ltd. was established in **1974** in northern Taiwan. After more than 30 years of growth and accumulation of knowledge in products and technologies,
- Tron Link has vertical integration ability **from design to manufacturing**, and has always been keeping up with the state-of-art technologies.
- Providing the **best services** to the customers is our top priority.

Product Evolution

OEM -----> ODM/IIM/OBM

- 1974~1990
 - Audible Slide viewer (*Singer*)
 - OHP (*Polaroid, Gakken*)
 - Walkie-Talkie
 - LCD game
 - Electronic Lab Kit
 - Science Kit
- 1991~2002
 - AIUEO (ELA)
 - Infrared App.
 - Radar Ball
 - Game Controller
 - FRS
 - Duplex Transceiver
 - Classic Japanese Robot
- 2003~
 - *Wireless/Energy/Mems*
 - RF App.
 - Recognition App.
 - SMA
 - RFID
 - Fuel Cell
 - Internet/Mobile Toys

Organization Chart



Management Team

Position	Name	Education
GM	Jr. Lin	BS. Nuclear Eng., NTHU, Taiwan
Proc. Unit	Y.Y. Chen	BS. Economics., FCU, Taiwan
QC Unit	Ted Lin	BS. Industrial Eng., CYCU, Taiwan
Business Unit	Paul Yang	BS. Mechanical Eng., NTUST, Taiwan
Marketing Unit	Jason Lin	BS. Mechanical Eng., NTU, Taiwan MS. Electrical Eng., USC, United States
Product Dev. Unit	Frank Lee	BS. Information Mgm., NTU, Taiwan MS. Information Mgm., NTU, Taiwan
Electrical Unit	Fuliang Chen	BS. Electrical Eng., CYU, Taiwan
Mechanical Unit	Jackson Lai	BS. Manufacturing Eng., YZU, Taiwan
R&D Unit	Isaac Chiang	BS. Electrical Eng., CYU, Taiwan MS. EE., USC, United States

Product Lines



Communication

- Walkie-talkie
- Baby Monitor
- Infrared Headphone

Consumer Electronics

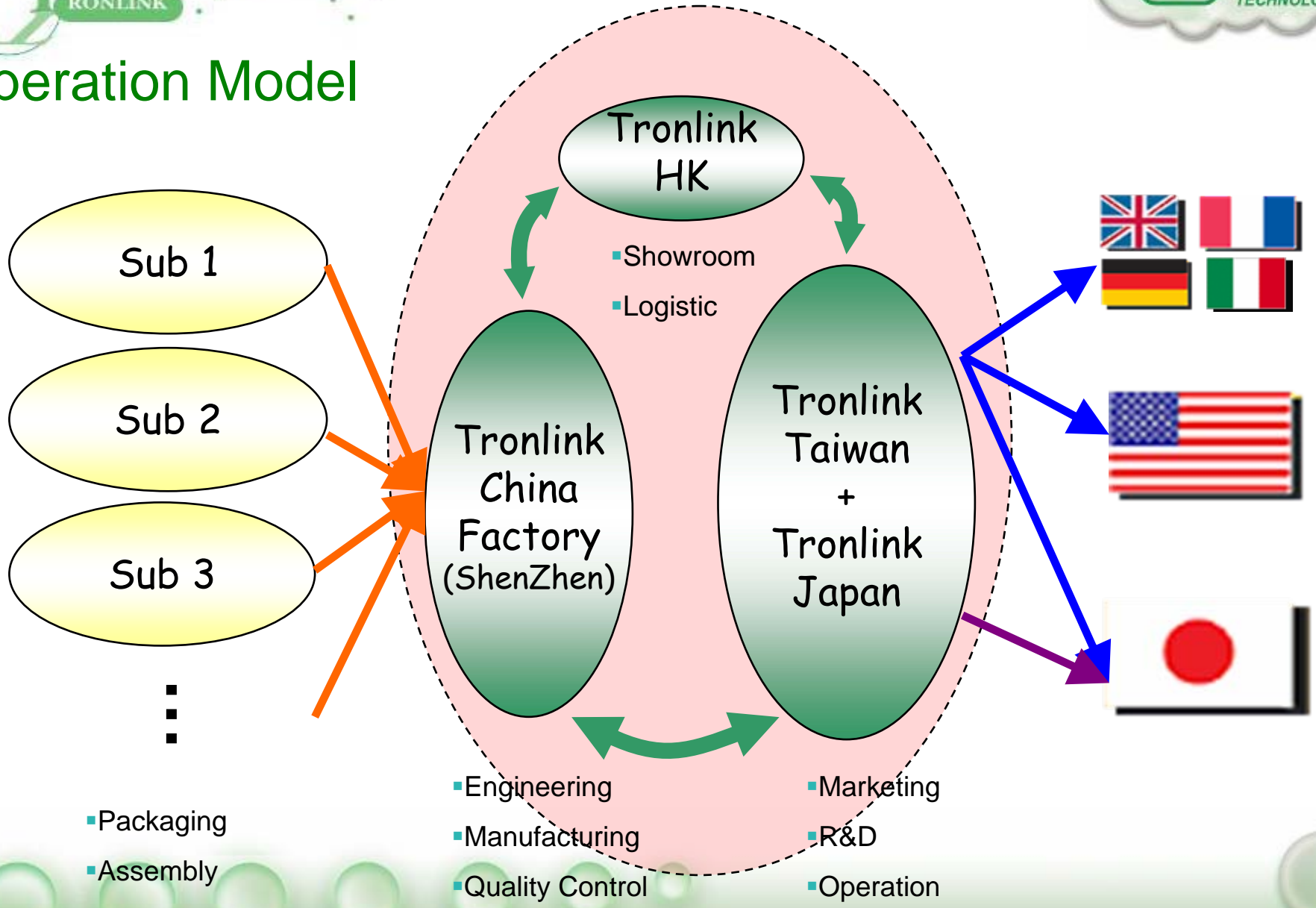
- Education Toys
- Games

Computer Peripheral

- Hub
- Mouse



Operation Model



Core Competency – customer&market driven

■ Pro-active marketing

-  : *NY Toy Show...*
-  : *Jan/Jul/Oct HK Toy Fair*
-  : *Tokyo Toy Fair*
-  : *Nuremburg Toy Fair*
-  : *Paris Toy Fair*
-  : *Toy Fair in London*

■ Fast integration

- Design collaboration
- Global outsourcing
- In-house fast prototyping

■ Flexible manufacturing

- Build-to-order
- Adaptive production
- Factory-less



Customers

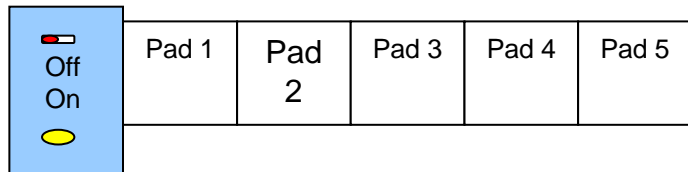
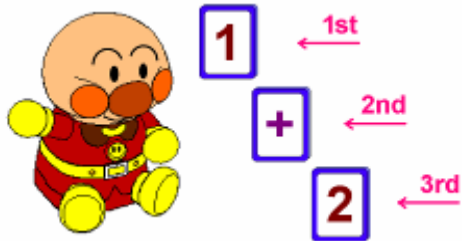


Our Technologies

- **Recognition Technology**
- **Multimedia Transmission System**
- **Emotion Intelligence**
- **Speed Measurement Technology**
- **Delicate Mechanical Design**



Recognition Technology - RFID



- The 1st company to implement RFID on toys in the world
- Interactive learning with fun activities
- Features:
 - learning letters/words, numbers/arithmetic, and colors/shapes via RFID cards
 - Line arrangement for spelling/arithmetic practice for different levels

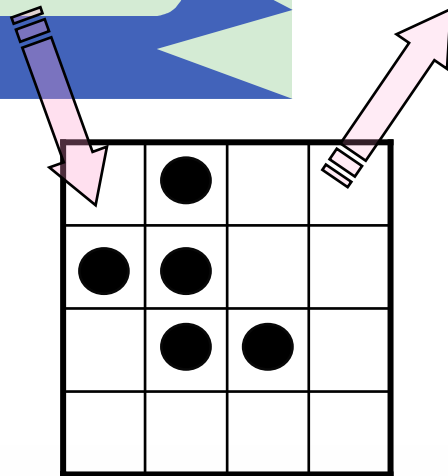
Recognition Technology - RFID



- **Intelligent and interactive system**
- **Applying the non-contact recognition technology to TV interactive learning**
- **Features**
 - **Non-contact make it magic**
 - **Doll can recognize different accessories to make it lively**

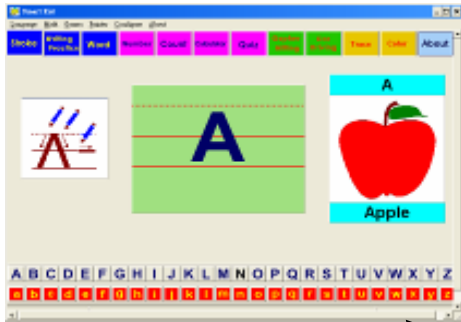


Recognition Technology – Optical ID Sensor



- Recognizing codes via the various combination of **dots in the almost invisible matrix**
- The codes can be printed on the book
- Features
 - Intelligent device recognizing the objects
 - Using the puppet pen to read the 2D bar code
 - Speaking and making sounds interactively
 - Replaceable cassette on pad

Recognition Technology – Handwriting(Kid Tablet)



	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	7	7
3	4	5	6	7	8
4	5	7	7	8	9
5	6	9	8	9	6

Multi-purpose device

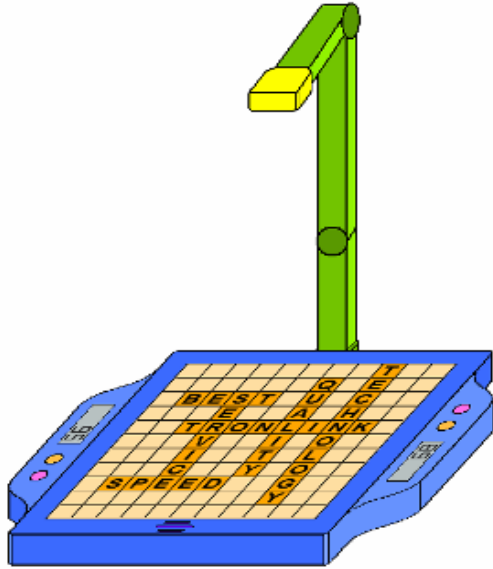
Stretch kid’s imagination as they trace, color, or draw.

Built-in programs

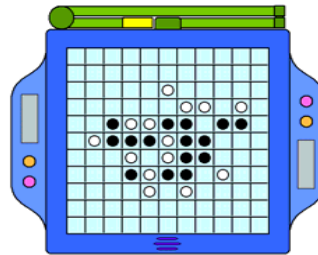
- For kids: letters, numbers, colors, or shapes.
- For students: arithmetic, handwriting stroke practice.
- Have fun with Interactive games
- **Cartoon characters and music in the programs**



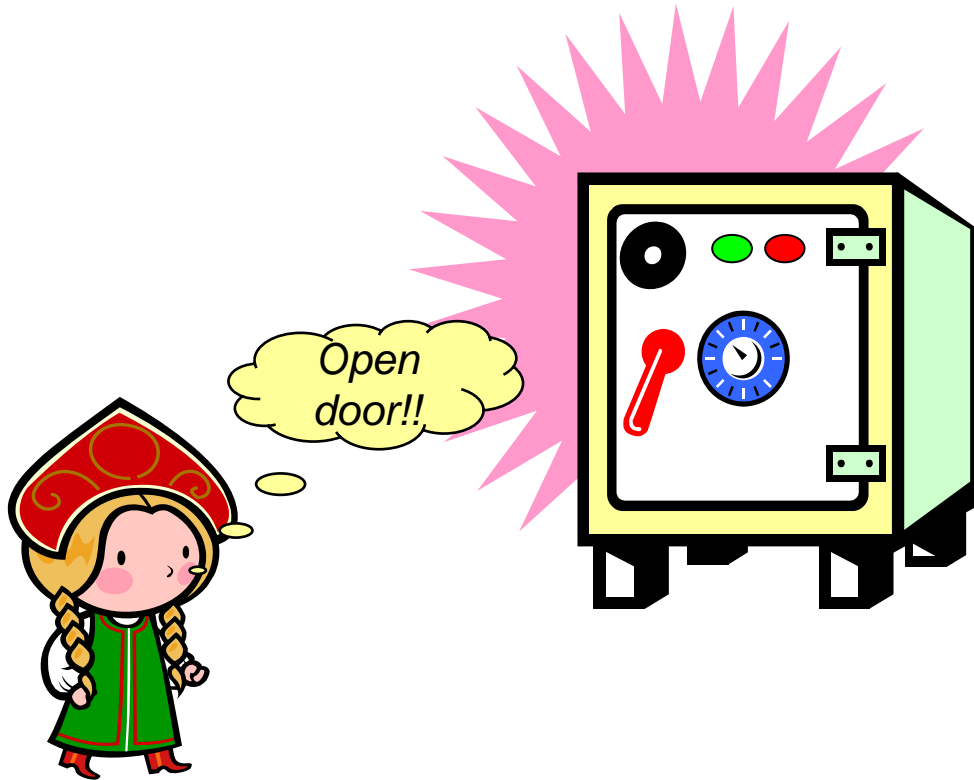
Recognition Technology - Image Recognition



- Implement the cutting-edge image recognition technology
- An embedded family game system without using PC
- Features:
 - Intelligent device which can really ‘SEE’ where tiles are
 - Automatic scoring basing on game rules
 - LCD shows the scores or game hint
 - Play games like Scrabble, cross word, word solitaire, chess, gobang (five in a row), etc.

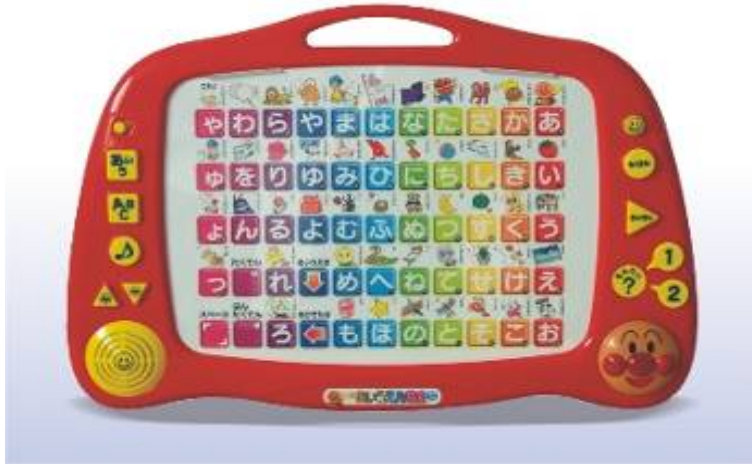


Recognition Technology – Voice Recognition



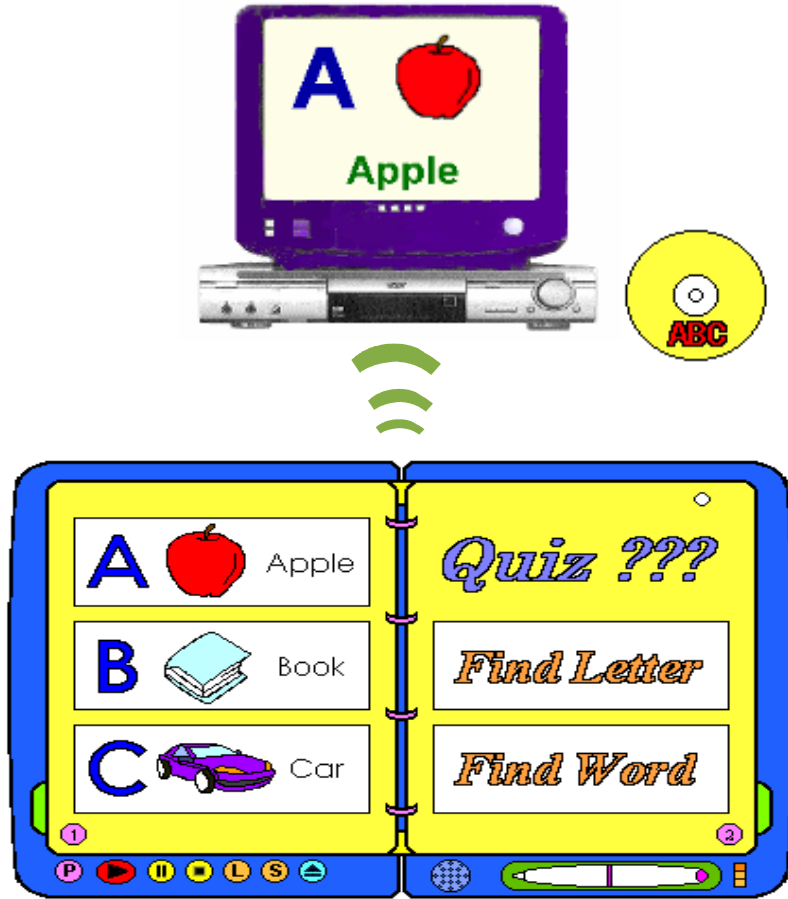
- **Implement the latest voice recognition technology**
- **Both speech dependant and independent functions are available**
- **Features:**
 - ‘Voice Key’ for kid’s first safe box
 - ‘Speech kit’ to combine speech recognition/speech/recording experiment.
 - ‘Speech Robot’ served as a virtual teacher for interactive language learning

Recognition Technology – Membrane



- **Touch and learn system**
- **With more than 10 years membrane technology**
- **Develop more than 20 kinds of products**
- **Features**
 - Learn through coloring and finger touching.
 - Teaches letters, numbers, phonics, vocabulary, spelling, colors, and music.
 - Rich replaceable sheets for play
 - Replaced Cartridge

Recognition Technology – DVD eBook

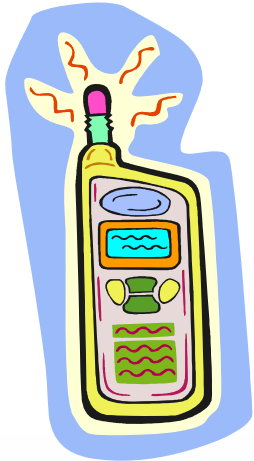


- Book style design
- Embedded DVD remote control
- Turns DVD player and TV into home multimedia learning/game center
- With special-designed DVD-Video titles, it turns out to be an interactive toy or a video game controller.
- Can be played alone without DVD player but still owns interactivity and sound effects
- Demo

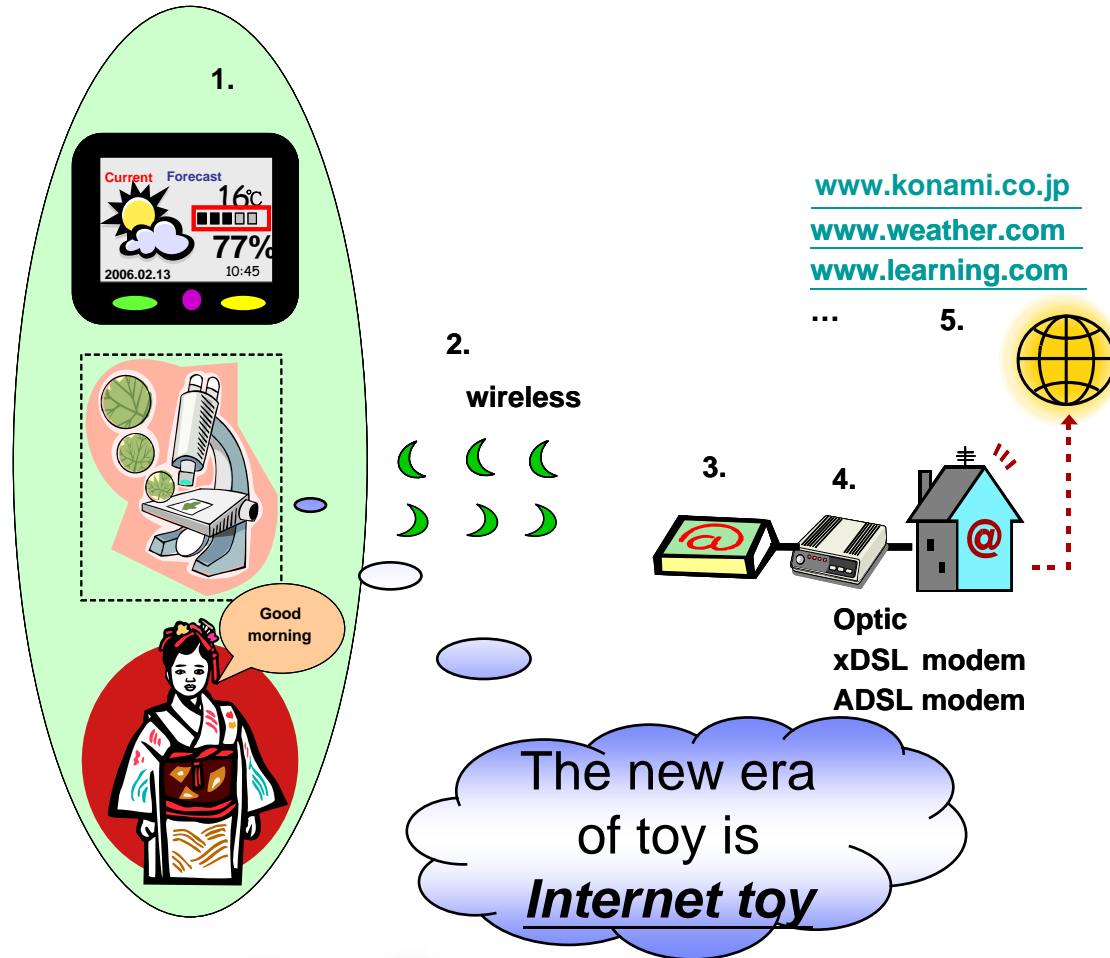
Multimedia Transmission System - 2.4GHz RF Application



- **Deliver both Audio and Video wirelessly**
- **With 30 years of RF development experience**
- **Provide more than 1 million pair of walkie-talkie per year in 1990's**
- **Features:**
 - lovely doll with lifelike behavior
 - Provide communication for baby and parents
 - Interactive way :
 - Connect to telephone line
 - Walkie-talkie
 - Baby monitor
 - Playing music



Multimedia Transmission System – Internet Content Agent



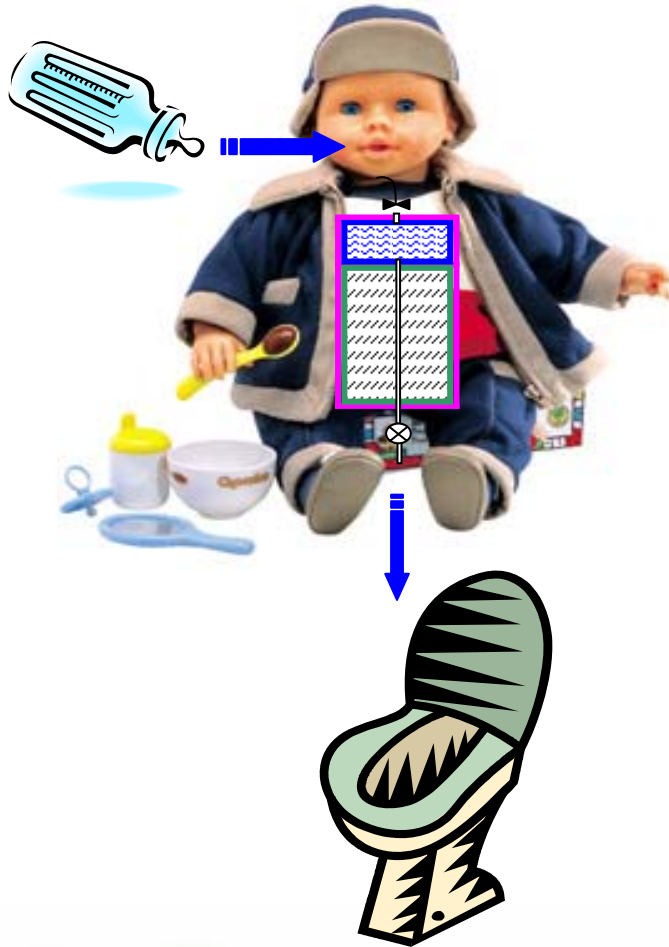
- Internet Content Agent
- PC is not necessary
- Retrieve real-time information on-line
- Features:
 - Take the advantage of real-time update
 - Countless content

Emotion Intelligence– Bath Doll



- **Using various state-of-art technologies to make the lovely doll with lifelike behavior**
- **Features:**
 - water-proof/Speech
 - Giggling when sits on the water in the bath tub.
 - Singing when her navel is touched
 - Speaking when one of her hand is held

Emotion Intelligence - Drink Doll



■ Features:

- lovely doll with lifelike behavior
- RFID/Touch Sensor/ Speech
- Water insertion with baby feeding bottle(anti-reverse)
- Water outflow when doll is placed on potty
- Speaking when his stomach is cared

Emotion Intelligence – Karaoke/Dance Doll



■ Features:

- lovely doll with lifelike behavior
- Wireless microphone for karaoke
- Dancing with different tempos
- Vivid dancing with hand-lift and turnaround feature

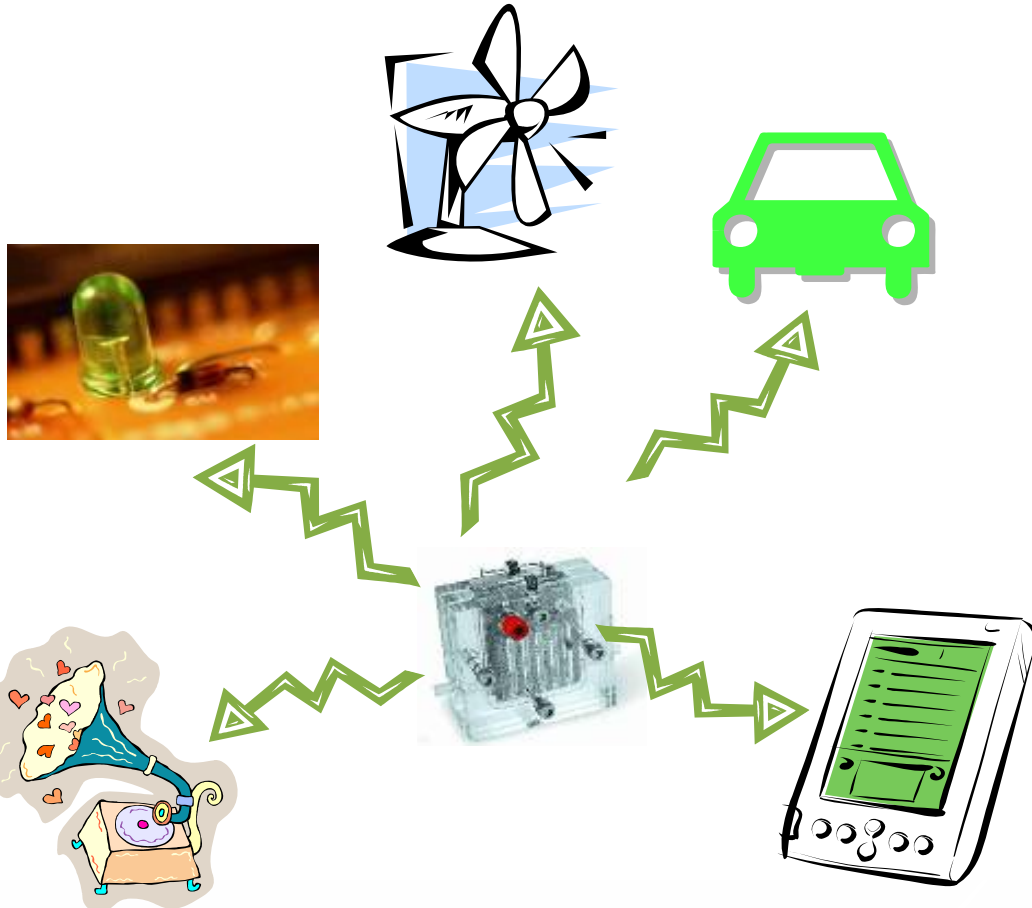


Emotion Intelligence - Shape Memory Alloy(SMA)



- Applications need **silent, smooth, micro movement and powerful** characteristics
- Features:
 - lively doll with natural expression via nano-muscle(from SMA)

Educational Kit - Energy Kits



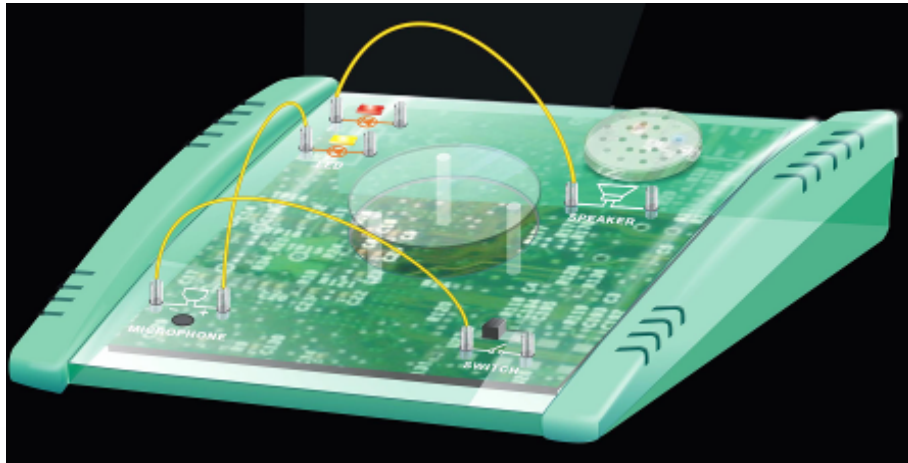
- Fossil is estimated to run-out in 40 years, seeking for alternative energy is the trend
- Provide versatile kits for kids to learn the Solar and Fuel cell concepts thru experiments.
- Features:
 - No pollution emission
 - Energy transformation practice among solar, electrical, mechanical, and chemical energy
 - Driving melody IC, LED, motor,... via these alternative energies

Educational Kit - Science Kits



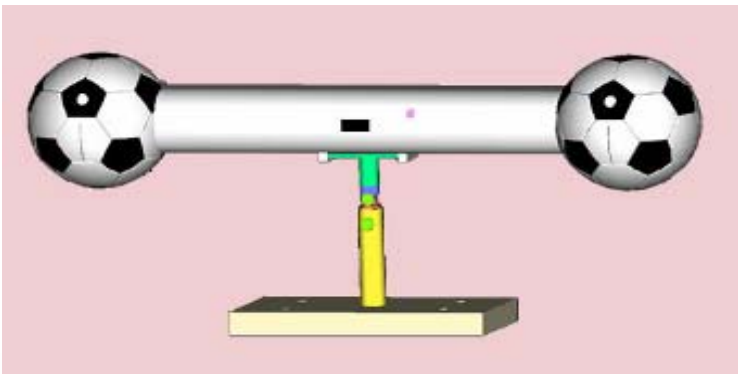
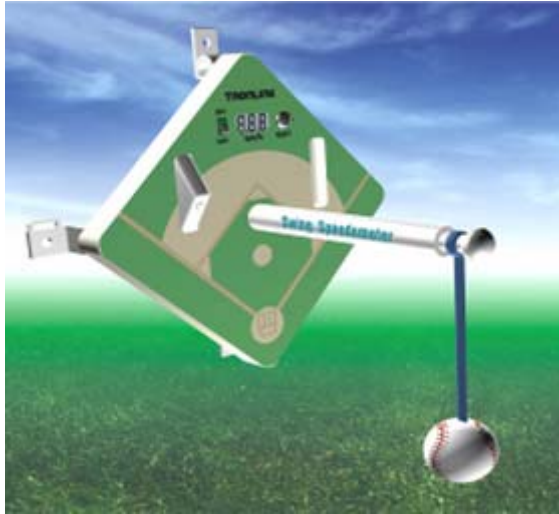
- **DIY kits by putting the parts together and benefit from hands-on learning process.**
- **Allowing kids to explore the basics of scientific phenomena, and experience the fun and magic**
- **Provide more than 120 science kits**

Educational Kit – Electronic Project Kits



- A complete line to learn electronics from very beginning to advanced.
- Containing several hundreds projects covering **basic electronics, radios, digital logic, lights, sensors, voice recording, RFID...etc.**
- The children can enjoy the fun and magic through rich experimenting.
- Provide 30-in-one, 40-in-one, 60-in-one,....150-in-one sets for different requirements

Speed Measurement Technology



- Implement state-of-art hand-sensor technology to measure pitching/swing/kicking speed.
- Patent for each speedometer in Japan, Taiwan and mainland China (pending in US).
- **Baseball, softball, cricket ball and football.**
- **Feature:**
 - Standard (size and weight) ball!
 - Automatic power shut-off after 2 minutes if not in use.
 - 4-digit LCD display
 - Easy to operate

Classic Robots



Bow Shooting Boy



Tea Serving Boy



Backward Somersault

- A serial of mechanical dolls restored according to the "Mechanical Illustration", in the 18th century.
- In 18th century, artist made it with superb craftsmanship in a very limit amounts
- In 21th century Tronlink made it to mass production
- Features:
 - Challenges your craftsmanship with this sophisticated science kit.
 - No battery required to make it move. Using the winding-up spring as the power source.
 - Dressed up in classic Japanese royal household servant style.
 - Learn about the automatic mechanisms from this original robot.

Thank you!!

