

Institute for Infocomm Research (I²R)

Imagination to Reality



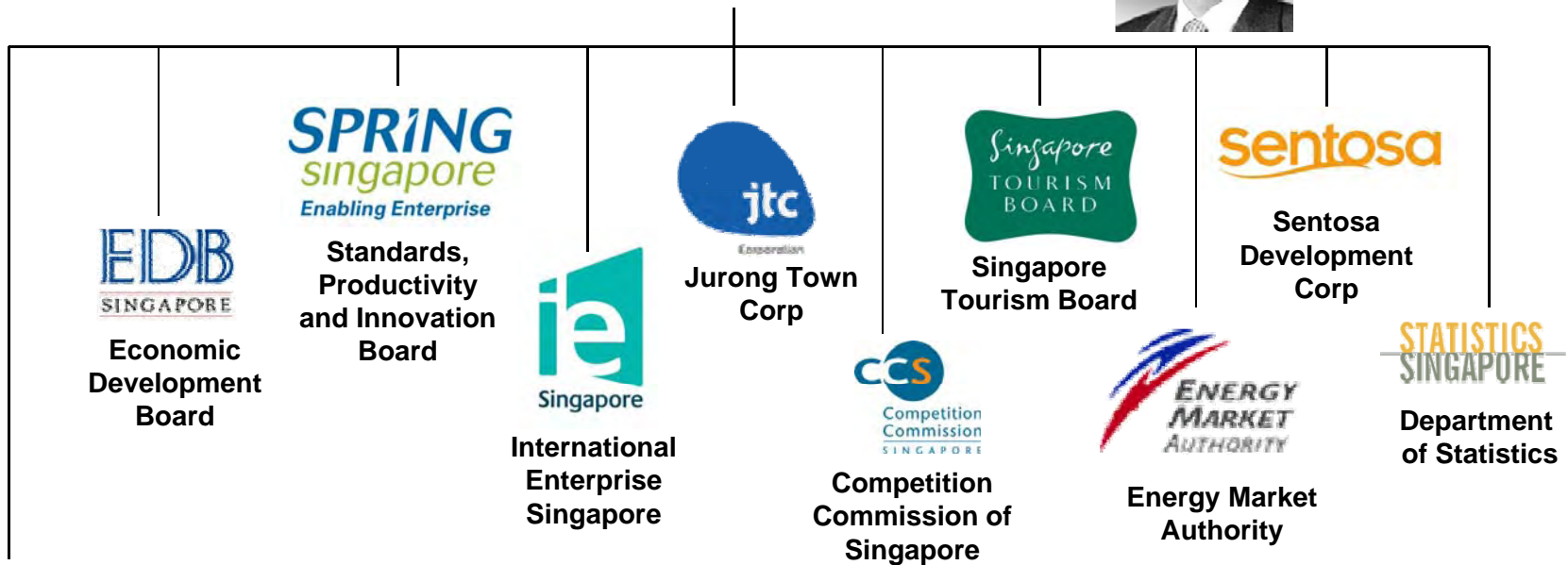
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Agencies under MTI

Ministry of Trade and Industry

Minister : Lim Hng Kiang



*“A*STAR’s role is to be the engine for transforming the economy into a knowledge-based and innovation-driven one.”*





Mission

To be the globally preferred source of innovations in '*Interactive Secured Information, Content and Services Anytime Anywhere*', through research by passionate people **dedicated to Singapore's economic success**

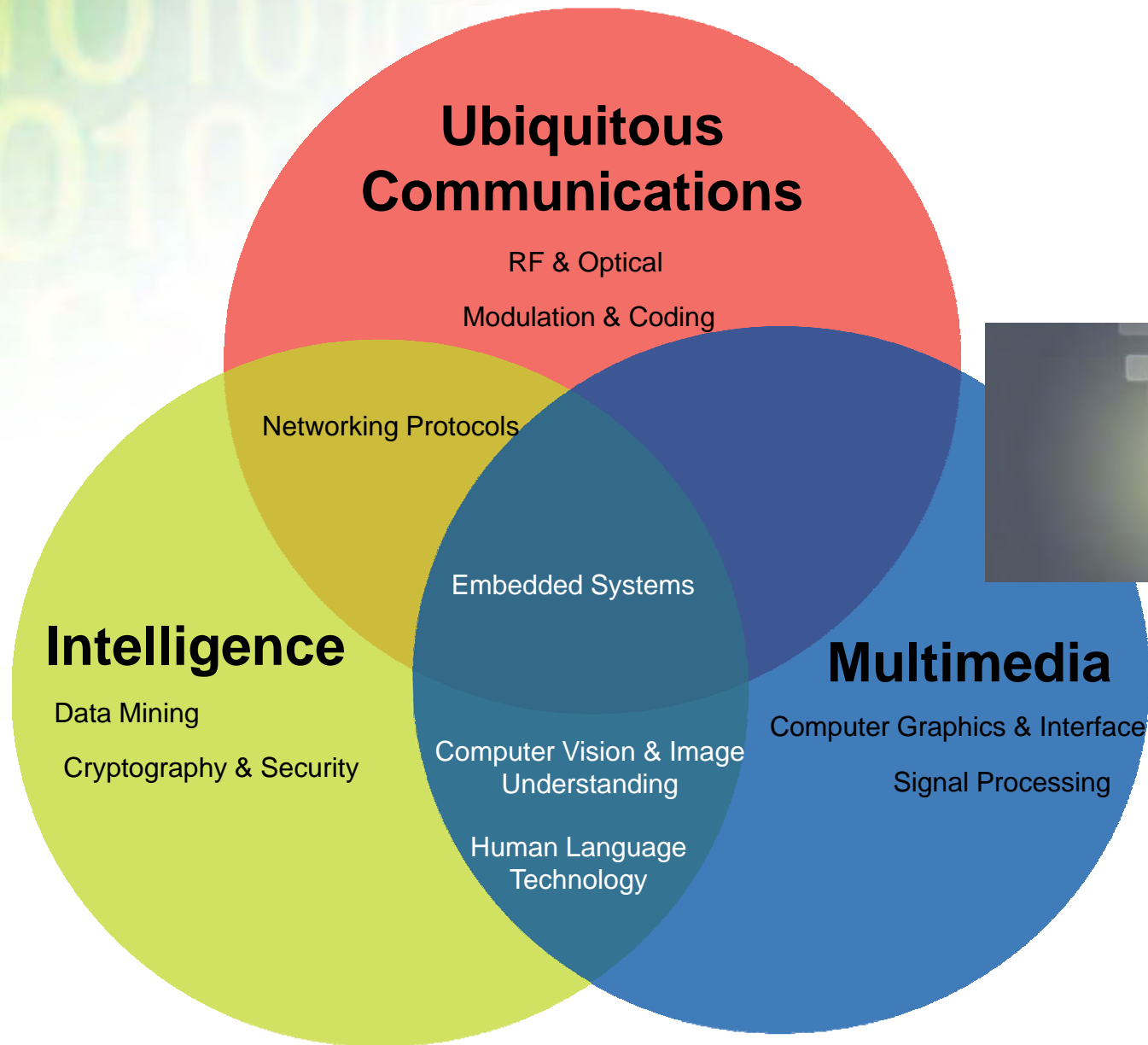
Vision

The Infocomm and Media value creator that keeps Singapore ahead

Mantra

Imagination to Reality

Enabling or Platform Technologies – 3 Areas of Research Focus

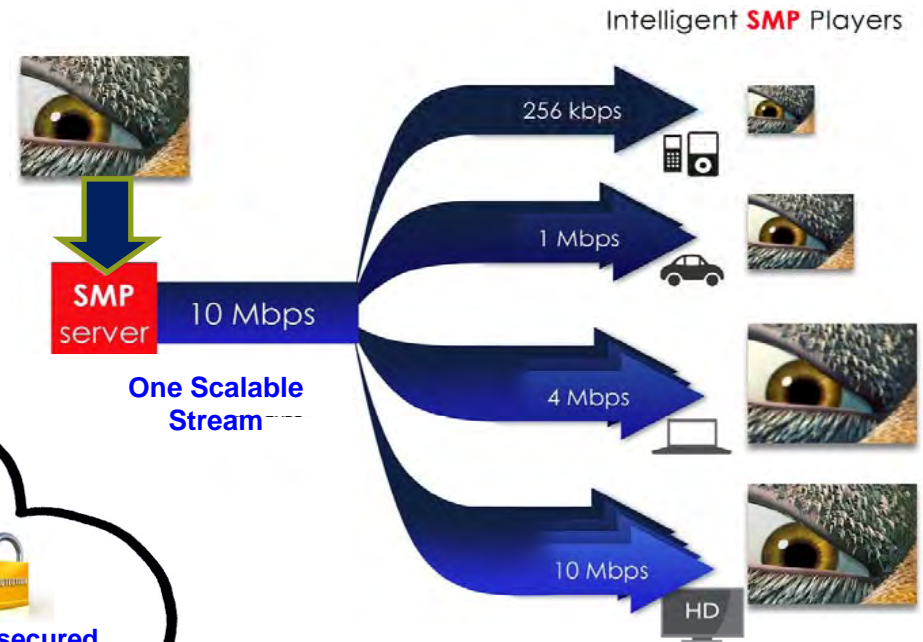
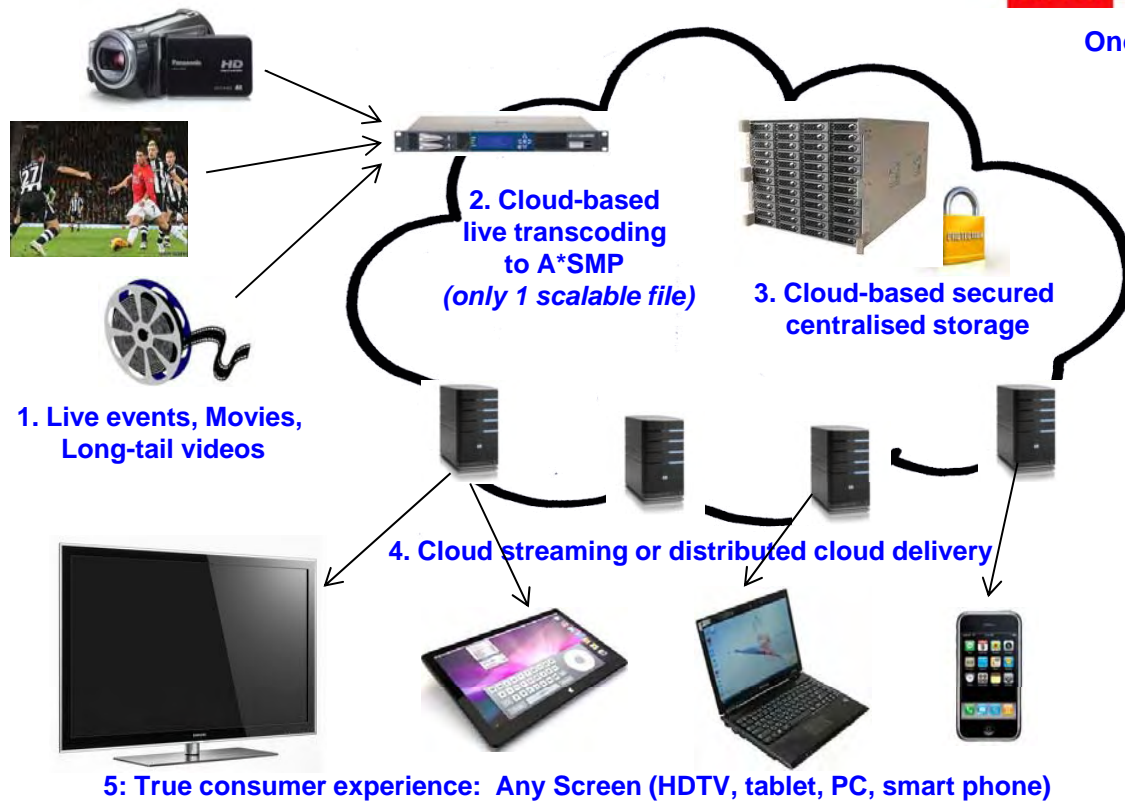


Selected I²R Technologies

- Scalable Multimedia Platform
- 3D Face Modeling
- Mobile Image Recognition & Annotation
- High Dynamic Range Imaging (with Ghosting Removal & Image Alignment features)
- Language Translation
- Speech2Singing

Scalable Multimedia Platform (SMP)

Personal Media Locker Use Case

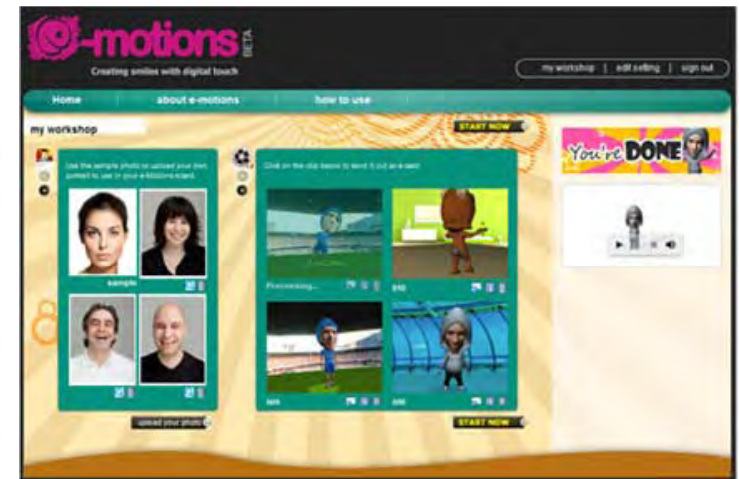
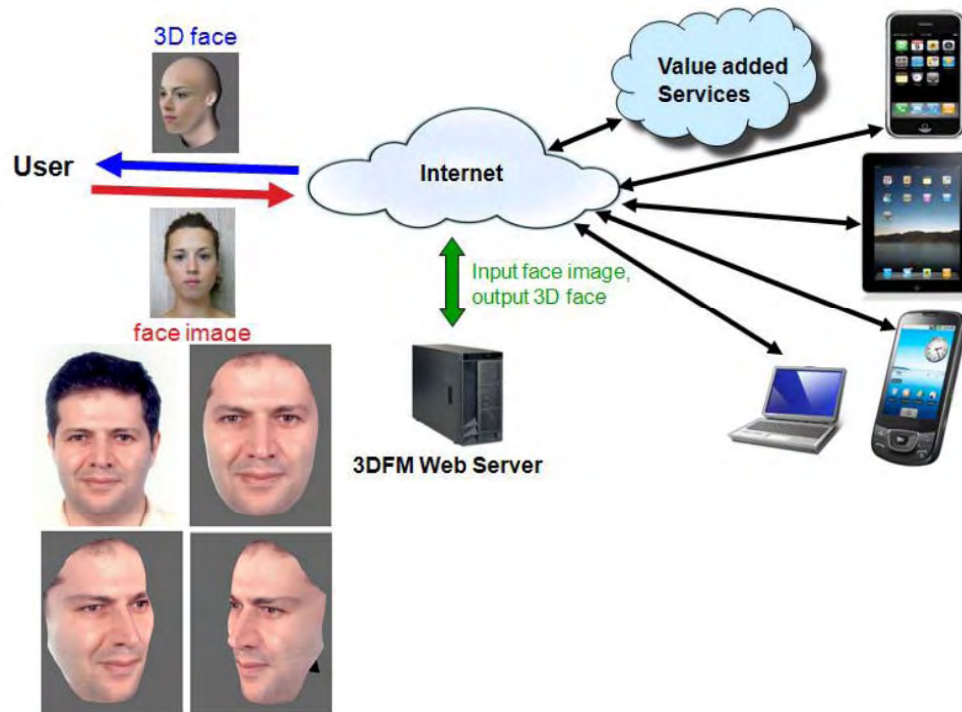


Windows Adaptive SVC

- MPEG4 SVC format
- Adaptive SVC Streaming
- DirectX SVC Decoder
- Supports fixed H.264 players

3D Face Modeling

- Photo-realistic 3-D face reconstruction from a single 2-D image
 - Fully automatic (no manual interaction required)
 - Real-time
 - Does not require any 3D scanner
 - Windows-based SDK
 - Trial web-service available at www.my3dface.sg



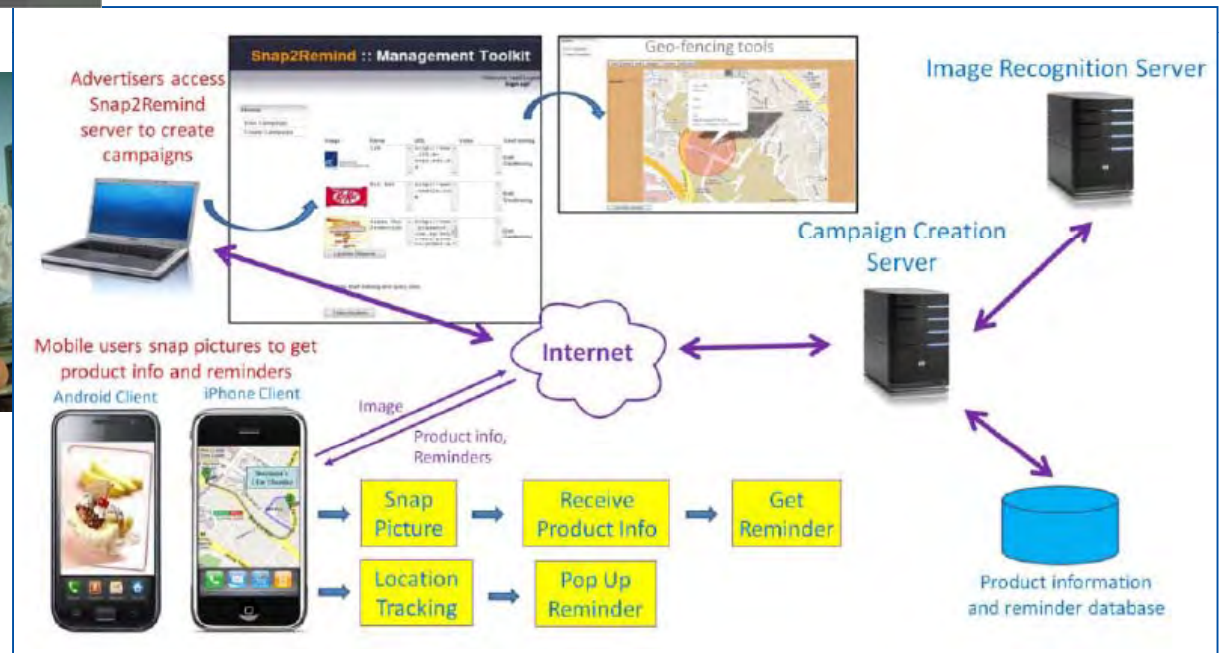
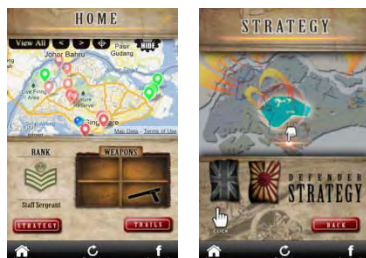
Mobile Image Recognition & Annotation



Print Advertising Use Case

http://www.youtube.com/watch?feature=player_detailpage&v=nNLGIU-QzYg
 OR Goto YouTube - look for "iSnap, Star, mobile"

Other Examples
 -Tourism
 -Education



Windows & Linux-based SDKs


File Edit View Controls Store Advanced Help

iTunes

star mobile

App Store Books Podcasts iTunes U Sign In

App Store > News > Star Publications (Malaysia) Berhad



The Star Mobile

Description

Stay informed with the latest news, stock price and unit trust price on the go with The Star Mobile. Follow the development of the companies and people that you care about and receive timely email notifications....

Star Publications (Malaysia) Berhad Web Site > The Star Mobile Support >

What's New in Version 1.4.1

- View websites and watch videos in landscape mode
- Display snapping status.

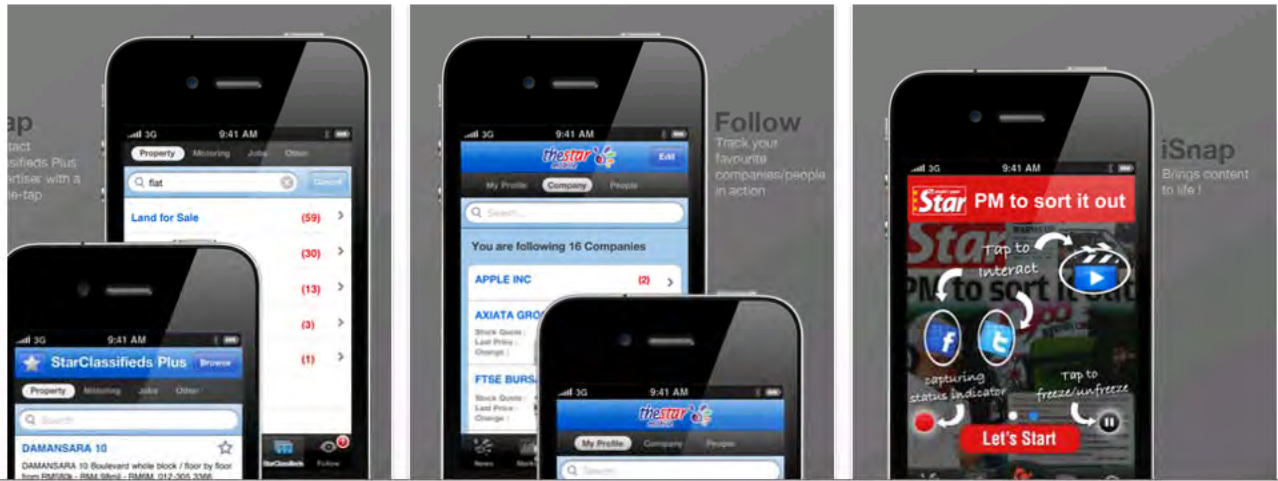
Free App

Category: News
 Updated: 14 May 2012
 Version: 1.4.1
 Size: 4.8 MB
 Language: English
 Developer: Star Publications (M) Bhd
 © 2012 Star Publications (Malaysia) Berhad


Rated 4+

Requirements: Compatible with iPhone, iPod touch and iPad. Requires iOS 4.2 or later.

iPhone Screenshots



More iPhone Apps by Star Publications (Malaysia) Berhad



MyStarJob
The Star ePaper

start

3 Micr... 3 Win... e-motio... 2 Micr... Adobe ... @iTunes 100% 5:43 PM

High Dynamic Range Imaging

Key Features

- Removal of Ghosting Artifacts especially for scenes with moving objects
- Image Alignment especially for handheld image capture



Initial handheld burst mode captures



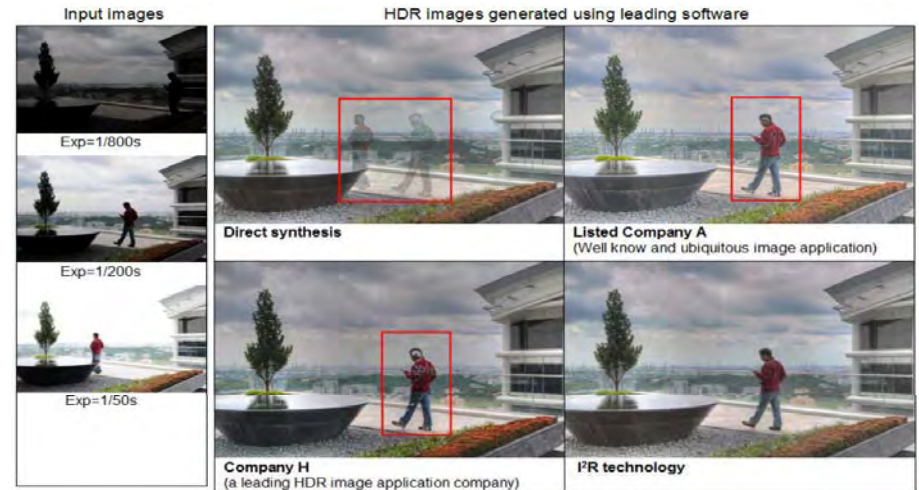
By Company A

By Company B



By Company C

I²R Technology



Windows SDK
Android (3-6 mths)

Language Translation



Text to translate

Highlight Selection Paste Clear

Dari sembilan korban tewas, kata dia, enam di antaranya meninggal di tempat kejadian, sementara tiga lainnya meninggal dalam penanganan tim medis di Rumah Sakit Umum (RSU) Langsa, Aceh Timur. Persoalan jabatan Panglima Tentara Nasional Indonesia (TNI) antara DPR dan Presiden Susilo Bambang Yudhoyono menunjukkan masih ada upaya mempolitikasi jabatan tersebut. Namun hal itu bisa diubah dengan akses komunikasi data melalui voice over Internet Protocol (VoIP). Seperti yang diungkap dalam The Scoerbst terbaru, National Institute of Dental and Craniofacial Research (NIDCR) telah memanfaatkan tujuh sumber dana yang ada senilai 27 juta dollar AS untuk mengembangkan kit diagnostik dari ludah. [International Center for Islam and Pluralism](#) (ICIP) bekerja sama dengan Kedutaan Besar Prancis untuk Indonesia dan Forum Jakarta-Paris menggelar seminar bertema "Pemikir Baru Islam, Pluralitas Agama dan Sekularisasi", Selasa (21/6) di Aula Wisma PKBT Jl Hang Jebat III/P3 Kebayoran Baru Jakarta Selatan.

Translated text

Highlight Selection

From the nine victims killed, he said, six among them died in the scene, while three others died in the handling of medical team in the General Hospital (RSU) of Langsa, Aceh Timur. Issue of post of Commander of Indonesian National Army (TNI) between House of Representatives and President Susilo Bambang Yudhoyono shows still that there is effort to politicise that post. However that matter can be changed with access of data communication through the Voice over of Internet Protocol (VoIP). Dental and Craniofacial Research (NIDCR) utilised seven Fund sources that exist-worth 27 million dollar for the development of diagnostic kit from saliva. [International Center for Islam and Pluralism](#) (ICIP) co-operate with Embassy of France for Indonesia to hold seminar on "New Intelligence of Islam, Religion Plurality and Sekularisasi", Tuesday (21/6) at Hang Jebat III/P3 of Kebayoran Baru of South Jakarta.

Message	Translated Text
Which bus goes to Changi Airport from here...	Bus yang mana pergi ke Lapangan Terba...
我可以在牛车水买什么纪念品?	What souvenir can I buy at Chinatown?
in this area, which is your favourite shoppi...	在这个地区, 是你最喜欢的购物中心?
Masjid terbesar di Singapura terletak di ma...	The biggest mosque in Singapore is locat...
你知不知道任何一间好的旅行社?	Do you know any good travel agency?

Key Features

- Language-to-English, English-to-Language pairs
- Focus on Southeast Asian languages
 - Chinese
 - Bahasa Malaysia
 - Bahasa Indonesia
 - Vietnamese
- (currently Vietnamese-to-English)



Speech2Singing

Speech (Recited Lyrics)



Potential Applications

- Entertainment
- Education



**Database
(Lyric & Song Model)**



Synthesized & Personalised Song



Key Features & Benefits

- Voice timbre of the original speaker & melody details are preserved in the synthesized song
- Automatic way to generate natural singing for computer applications.
- Method to generate personalized singing for people without singing skills.
- Interactive way of teaching users how to sing with the right melody
- Windows SDK (3-6 mths)

THANK YOU

For additional information,
Please visit our website:

www.i2r.a-star.edu.sg

Email: inddev@i2r.a-star.edu.sg

