Vocsis Corporation Company Profile

Corporate Philosophy

Vocsis Corporation contributes to improving efficiency of medical practices, and extending healthy life expectancy through utilization of medical images by applying 3D image processing technology

Entrepreneurial Background

CT is an excellent device that can measure the internal structure of human body precisely and non-invasively. The technology has half a century long history for practical use since 1971. Japan equips the largest number of CT and MRI per capita in the world, and total of 46 million scans are taken annually. The devices are so popular that one out of three people takes a scan in a year on average.

On the other hand, image processing technology has made great progress in recent years so that no-driver automobiles starts to run around. Image processing technology in the medical field also was advanced, however, segmentation of individual organs, the most fundamental part of the medical image inspection has not been established. This is because doctors are trained to diagnose by seeing multiple of planar images, and therefore, there is no such need in the medical community.

Due to the increasing medical demands from aging population and lack of medical professionals to the demands, the Japanese medical system is inevitably expecting significant challenge in near future. The scan data from CT and MRI accumulating massively every day should contain unlimited possibilities to provide solution to this problem. Though the CT and MRI are prevalent, Japan suffers the lack of radiologists in image diagnostics. We are in a situation where the huge amount of invaluable medical images are scarcely utilized by manual inspection by doctors.

Mr. Hounsfield and his CT image

cf: http://www.bioclinica.com/blog/evolution-ct-scan-clinical-trials

CT and MRI devices per a million of population

	CT			MRI		
	Country	Devices	Per M	Country	Devices	Per M
1	**Japan**	12,943	101.2	**Japan**	5,990	46.8
2	Australia	1,148	50.5	USA	10,815	34.4
3	USA	12,740	40.8	Itary	1,463	24.5

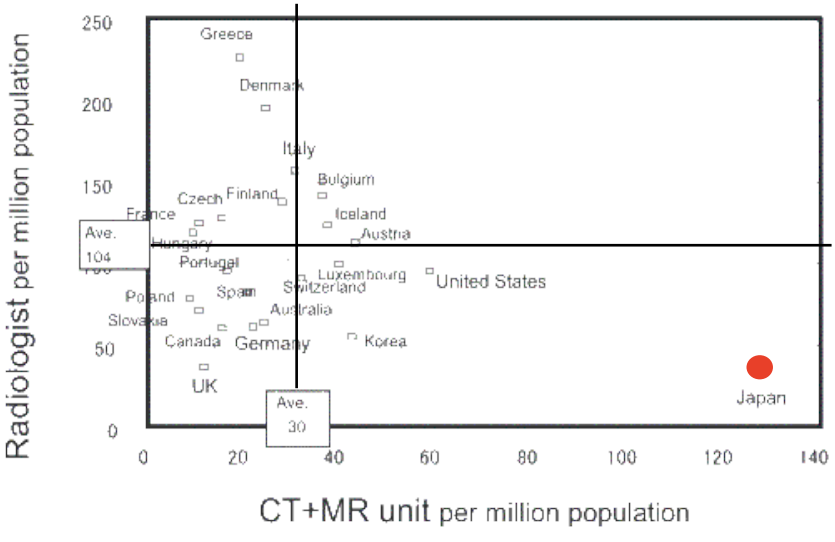
Global Note

Number of scans of CT and MRI

	Hospitals	Devices	Scans/month	Estimated Scans/year
CT	11,777	13,116	2,606,717	31,280,604
MRI	5,913	6,508	1,254,021	15,048,252
合計	17,690	19,624	3,860,738	**46,328,856**

Operating statistics of radiological image measuring apparatus
Sep. 2014, Ministry of Health, Labor and Welfare

Number of CT and MRI devices vs. Radiologists



120(12),943-951 2011, Journal of Kyoto Prefectural University of Medicine

ANATOMIA

Inter-sectional images from CT can be interpreted only by trained experts such as doctors, but when the organs are presented stereoscopically, anyone can recognize intuitively either it is natural or in some abnormal state. Vocsis Corporation is providing stereoscopic viewing service of medical images from CT, named ANATOMIA. This service further provide benefits. When a patient understands the internal structure of his or her body, it will deepen patient's involvement in the medical treatment, and strengthen consciousness to health that results in longer healthy life expectancy.

Existing medical image processing functions are designed solely for medical experts. Since ANATOMIA is an unprecedented attempt to provide the service to the-rest-of-us, there were many unknowns. That was the reason why Vocsis exhibited ANATOMIA prototype at RSNA in 2015, an eminent event in the field of radiology. We collected favorable comments from medical experts, and became confident in commercialization of the service.

RSNA Exhibition Nov., Dec. 2015

Exhibition Booth of Vocsis Corporation

Our Vision

The architecture of ANATOMIA can provide the latest functions to customers by implementing the image processing algorithms on the Internet server side, and customer accesses to it through convenient personal devices, such as PC or tablet. A foreseeing improvement of ANATOMIA is to introduce the technology to automatically generate 3D organs where current service requires some level of user interventions.

Establishing fully automated segmentation of organs will give fundamental impact to application of machine learning technology. The CT data, which is merely a collection of cross-sectional images, will change to organ-specific data to which machine learning algorithms can be applicable.

It is well known that large amount of data together with correct and less-variant doctor's diagnostic results are essential to establish an excellent machine learning algorithm, and it is where Japan is idealistically positioned. By pursuing 3D image processing through ANATOMIA, Vocsis Coprporation promotes collaborative research with medical institutions, universities, and tirelessly pursuing efforts to establish efficient computer-aided diagnosis technology.

About Vocsis Corporation

Vocsis Corporation was established by members having extensive experience in the technology development fields of communication, signal processing, biometrics, and in the new business development based on the technologies and products. Vocsis pursues the promotion of computer-aided diagnosis technology as ANATOMIA as a first step.

VOCSIS
Vocsis Corporation

Founded: June 22, 2015
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