

# Next-Generation Healthcare Services

Services that connect the healthcare devices to the cloud, with the information appliance as the hub for personal health management

With healthcare costs to society skyrocketing in most of the world, the need is acutely felt to bring healthcare management to the home, while empowering the individuals. Personal health management necessitates the ability to collect, combine, and present in engaging ways the data acquired from the weight scale, the blood pressure meter, the pedometer, and the other medical devices that individuals use at home, and the ability to interact with the healthcare services cloud. eflow brings its vision for "total healthcare, addressing the very needs of personal health management with solutions for numerous real-life scenarios, from preventive health management to daily support for the elderly, that seamlessly connect the medical devices to the information appliances to the cloud.

"We believe the information appliance is the missing link between the individuals and the healthcare providers, between the healthcare and fitness devices and the healthcare cloud, as it becomes the center of personal health management. By doing so, individuals get engaged and committed as they can take their health literally into their own hands."

**Koichi Makabe**  
Chief Executive Officer, eflow Inc.

## Solutions for the Next-Generation Healthcare Network

With the advent of the next-generation network (NGN) and, particularly, of the home network, the demand for services that offer the management of personal data on the network is gaining momentum. A new era of healthcare management services begins, where data collected from the medical devices is uploaded to the cloud. By making the next-generation information appliance the hub for personal health management, eflow makes it possible to develop services that can truly connect the medical devices to the cloud, while giving control to the individual.

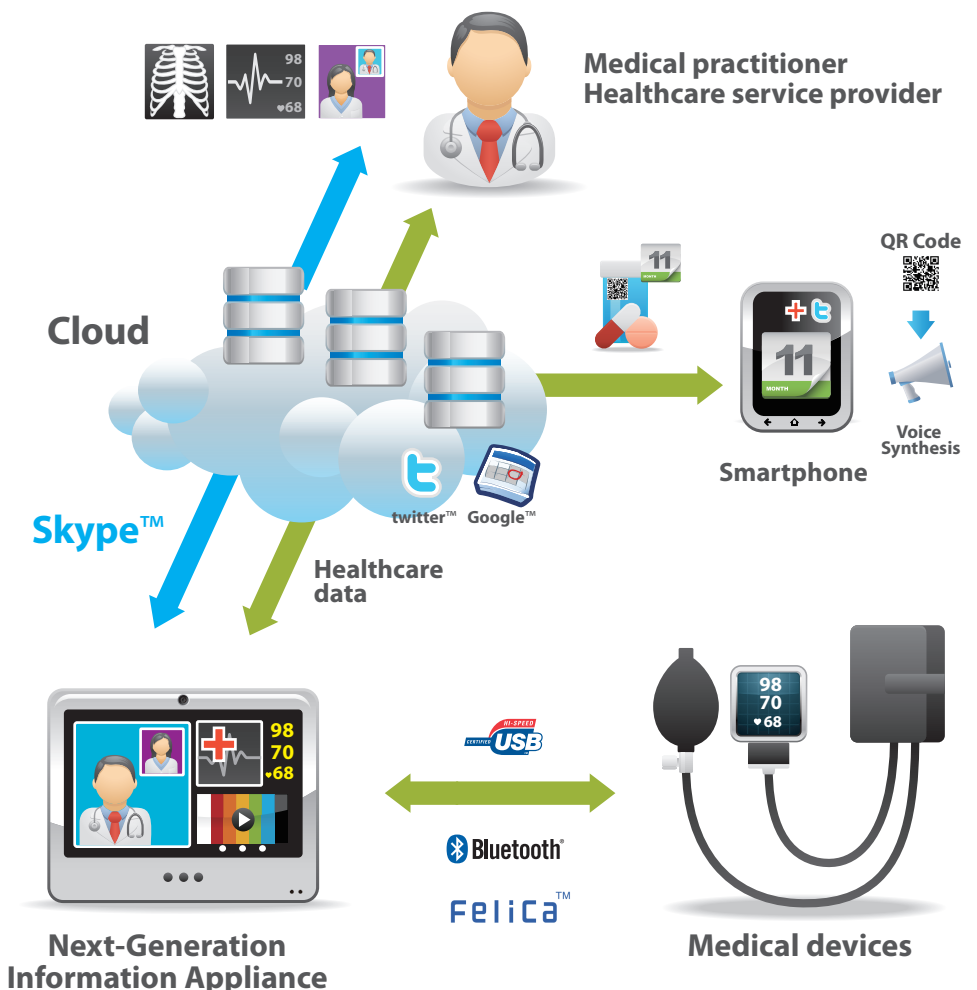
### Highlights

#### Next-Gen Information Appliance

- Software and reference hardware design package tailored to specific needs
- Easy implementation of rich services on the underlying Android™ platform
- Rich user experience thanks to deep integration with cloud applications and services (Google™ Health, Google Calendar, Twitter™ etc.)
- Increased value-add offered by the integration and the extensive customization of eflow's proprietary components (rich media player, voice synthesis engine, widgets, etc.)
- Remote consultation based on the Skype™ platform

#### Cloud Services

- Support for a wide variety of cloud services with specific usage scenarios
- Integration with multi-device service infrastructures (from smartphones to mobile internet devices to digital television)



(healthcare service image)



### Features

#### High customizability, high modularity

- Compact embedded browser
- Source code provided for total customization
- Support for web services platforms
- Widget framework included
- Can be used as UI framework
- Adobe® Flash®/On2 VP6 and later supported via eSpinner's plug-in interface
- Fast porting to new architectures



### Features

#### Highly secure, ultra lightweight system platform

- Platform-independence, high application portability
- Security: virtual machine technology use eliminates issues of memory corruption and application hangs
- Reliability: garbage collection use eliminates issues of memory allocation and memory pointers
- Incremental development: with the healthcare device and the IDE connected to the network, program changes are rapidly applied to the device, while error analysis and debugging are simultaneously performed.
- Remote maintenance

## on the information appliance

- eflow is inspiring the development of new compelling personal healthcare applications and services, by offering engaging user interactions, thanks to its rich-media player, widget and voice synthesis technologies, as well as **total customization** to fit particular needs and create differentiation.
- eflow is offering **remote video consultation** on the information appliance and over the network, integrating the Skype™ advanced voice and video conferencing capabilities.
- eflow is leveraging its own ecosystem of hardware partners to complement its software offering with **reference hardware designs** using the Android™ platform for easy and cost-effective deployment of rich healthcare services.
- eSpinner™, eflow's compact and highly customizable embedded browser, is used as both the **UI framework**, and the platform for fetching, displaying, and browsing data acquired from the cloud or the healthcare device.

## on the healthcare device

- CloudRunner™, eflow's ultra lightweight system platform integrating **virtual machine technology**, specifically targeted at the typically resource-constrained healthcare devices, can be implemented on top of the real-time system or the other proprietary operating system used on the device.
- Applications running on the CloudRunner platform on a given device can run on any other device that has CloudRunner, offering **easy portability**.
- CloudRunner and eSpinner form the ideal combination for capturing, displaying, browsing, and exchanging data on the devices.

#### CloudRunner VM features

Memory size on device	128KB ROM + 64KB RAM
CloudRunner kernel size	64KB (ROM)
CPUs	ARM (Thumb incl.), Intel® Atom™ (x86), SuperH™ (SH) other 32-bit processors

## on the server

- eflow is providing its own server-side database engine, network technologies and components, to allow the seamless exchange of data and the interaction with the healthcare cloud, helping to bring services to users across all their devices: from their home information appliance, to their mobile phone, to their television.

#### eFlow Inc.

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