DASSAULT SYSTEMES

FINANCIAL & BUSINESS SERVICES CASE STUDY
ABBALab inc.

ABBALab

Challenge:
Seed accelerator ABBALab inc. needed a system that startups and fellows could use to access sophisticated CAD software under license agreements anywhere, anytime, for their manufacturing projects.

Solution:
The company provides startups with the **3D**EXPERIENCE platform on the cloud for all their technology needs, which avoids having them invest in the software and hardware they need to develop their projects.

Benefits:
The **3D**EXPERIENCE platform provides a database-driven environment that enables easy and real-time access to a unique data referential from anywhere in the world, which facilitates co-creation and encourages new startups to join ABBALab's support program.

SPARKING INNOVATION IN STARTUPS

In 2014, Tokyo-based ABBALab created a support program for startups that wish to develop and market hardware for the Internet of Things (IoT). ABBALab proposes a wide variety of services, from funding and equipment to skill enhancement starting at the prototyping phase of early development.

"We were a platinum sponsor for the Gugen2014 hardware contest, which exiii Inc., developers of robotic prosthetic hands, competed in," Osamu Ogasahara, CEO of ABBALab, said. "When I approached exiii about joining our support program, Tetsuya Konishi, the exiii COO, said they'd come on board only if they could get access to Dassault Systèmes' design application CATIA. That's why we initially adopted CATIA," Ogasahara added.

Konishi explained that he founded exiii on the idea that he and his colleagues could provide the designs for everything from the mechanisms and substrates to the configurations and programming code of robotic prosthetic hands, which are extremely expensive devices, in an open-source format. "We also believed that using 3D printers to create prosthetics would be a game-changer because much more affordable than ever before," Konishi said.

Konishi explained why he conditioned his company's participation in ABBALab's support program to ABBALab adopting CATIA. "We tried many other design applications, but for me CATIA was the best solution in expressing the shape I had imagined." And Konishi adds, "If we didn't have CATIA, we wouldn't be able to express ourselves."

CLOUD-BASED TECHNOLOGY SUPPORTS CO-CREATION

Later on, Ogasawara acted as executive producer of DMM. make and created DMM.make AKIBA as a facility that provides various manufacturing equipment for prototyping for possible mass production in the future. For example, exiii develops its prosthetic hands with support from ABBALab and with equipment from DMM.make AKIBA. "When we brought our ABBALab operations to DMM.make AKIBA, we migrated to the cloud-based **3D**EXPERIENCE platform and started expanding our support system to more startups that might be joining our program down the line," Ogasahara said.

"The first thing about the **3D**EXPERIENCE platform that really grabbed us was its cloud-based approach, which opens up a lot of possibilities for co-creation since we don't have to deal with the restraints of working in specific locations," Ogasahara said. The other big thing was how the platform lets you save data in a database -not files - which helps ensure that the latest information is accessible in real time. This feature really ties in with the whole co-creation concept, enabling a lot of people to work on a single design in a collaborative setting."

It also provides users around the world with access to the most up-to-date information for new projects. For example, the data for exiii's prosthetic hand is available in completely open-source packages. Users in Colorado (in the United

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>
> — Osamu Ogasahara, CEO, ABBALab

States), Poland, and elsewhere around the world have already downloaded the data and started to use it in their own products.

"The only issue we face is converting the data into neutral formats like STEP or IGES when we deliver it to users, which means that the design ends up losing all its history information and other elements," Konishi said. "On the cloud-based **3D**EXPERIENCE platform, however, we can share all the data as is and remotely chat with other users. It helps get people on the same page quickly."
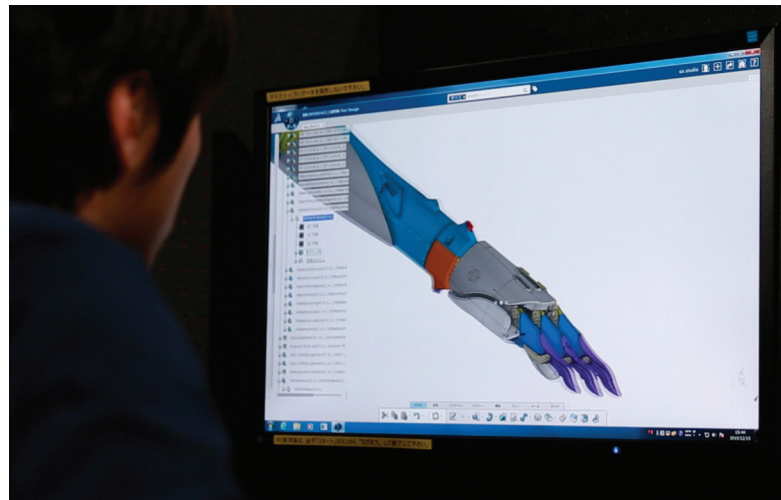
Moving forward, Konishi wants the environment to be more accessible to individual engineers. "There are so many people who want to break out of the company setting and become independent, but they know that they won't be able to get their hands on CATIA once they're on their own," he said. "This was always in the back of my mind. If there was an environment where engineers could use CATIA, there'd be a lot more people across the globe successfully tapping into their creativity to make their ideas come to life."

Another startup, Cerevo - Consumer Electronics REVOlution - creates innovative and revolutionary network consumer devices that aim at improving daily life. Cerevo joined the ABBALab initiative when its CEO, Takuma Iwasa, worked with Mr. Ogasahara from ABBALab on the DMM.make AKIBA launch.

"We've released more than ten mass-produced products over the years. For us, the program is a great way to pass the expertise we've gathered on to other companies and form collaborative relationships for joint development and other projects, " Gota Ishii, design engineer, Cerovo Inc., explains.

REAL-TIME COLLABORATION PROMOTES SYNERGY

Ishii hopes the cloud-based **3D**EXPERIENCE platform can do even more to help users connect and collaborate. "If you're providing design data to a mold manufacturer, for example, you still need to go to the actual worksite often, look at the prototype, and make the necessary changes to the data on the spot," he said. "It would be great if you could do all that remotely, from the office, using the cloud-based platform to look at the data with the manufacturer and go over the instructions for any revisions. The different startups that we work with at DMM.make AKIBA are coming up with concepts and releasing products that Cerevo wouldn't be able to pull off by itself. This means that there's quite a bit of synergistic

Top image: CATIA design of exiii's motorized prosthetic arm "HACKberry". For more information: www.exiii.jp/eng.html

Bottom image: "DOMINATOR" a smart toy recreation from the popular anime "PSYCHO-PASS" offered by Cerevo Inc. with over 100 different voice samples and sound effects.
For more information: dominator.cerevo.com/en/

Focus on ABBALab inc.
Japan-based incubation company supporting manufacturing startups by investing in prototyping projects.

Services: Provides logistic, seed round investment,hardware and training support for IoT related startups

Employees: 3

Headquarters: Tokyo, Japan

For more information
www.abbalab.com

Focus on Progress Technologies
Progress Technologies has placed innovation in manufacturing as our main theme since the birth of our company. Our company provides fully integrated service in design development and product development (Product designing, development process consultation, CAE/analysis, 3DCAD implementation, MATLAB/Shimulink and, HPC/GPU computing).
We also select a challenging theme such as development of robot/AI, development of IoT related product, etc. to work on as our contribution to advance Japan's manufacturing expertise.

PROGRESS TECHNOLOGIES

potential to explore right on-site. By encouraging fellow DMM.make AKIBA groups to share the resources they need and take advantage of data-sharing mechanisms, I think that synergy will really start to take off," he said.

"ABBALab's aim is to support companies that want to develop quality hardware whose value for customers speaks for itself," Ogasahara said. "The **3D**EXPERIENCE platform on the cloud provides start-ups with a wealth of design information for their projects, which will boost their capacity for innovation," he concluded.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3D**EXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.

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