

CADDOCTOR REDUCED 80% OF CAD DATA ERROR REPAIR TIME

Keywords: **PDQ, Healing, Translation**

IBUKI Inc., mold development and manufacturing company, introduced CADdoctor to check data quality, repair and translate 3D CAD data provided by their customers.

The CAD data repair time for engineers has been significantly reduced since the introduction of CADdoctor, and the CADdoctor became an important tool for their efficient mold development phase.

Background and Challenges – CAD Model Repair

IBUKI Inc. is a mold development and manufacturing company with more than 80 years of history. One of IBUKI Inc.'s strength is a unique technology called "mold decoration" that enables to carve detailed pattern on large mold. Their technology is highly valued from manufacturing companies across Japan.

Since 2015, IBUKI Inc. has been proactively challenging themselves to

streamline various operations with the corporate vision of "Fuunji of mold industry," which means to become a pioneer in the industry, and one of the challenges is to make the mold development phase more efficient.

IBUKI Inc. uses a CAD software "CADmeister" for mold development. "IGES," "STEP," and "Parasolid" are the main file formats that IBUKI Inc. receives from customers, and IBUKI Inc. used to experience data errors frequently when importing those files to CADmeister.

There were many data errors related to CAD geometry such as not being able to enlarge, shrink and modify 3D models.

Mold engineers had to find each error and repair them manually one by one paying attention not to change the original design intent. However, this approach took up a lot of time even just to find errors and affected the production lead time.



Company Name

IBUKI Inc.

Challenge

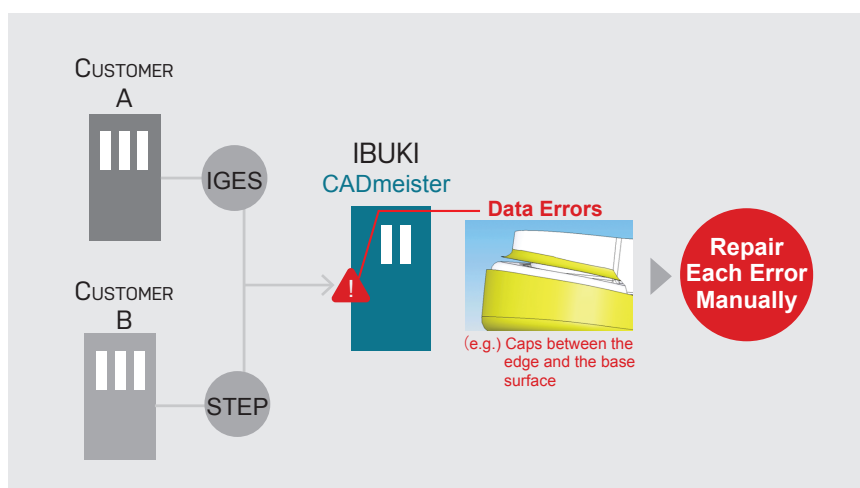
- Received CAD data associated with errors such as not being able to enlarge, shrink and modify 3D models
- Engineers spend time to find and repair each error one by one affecting the overall lead time

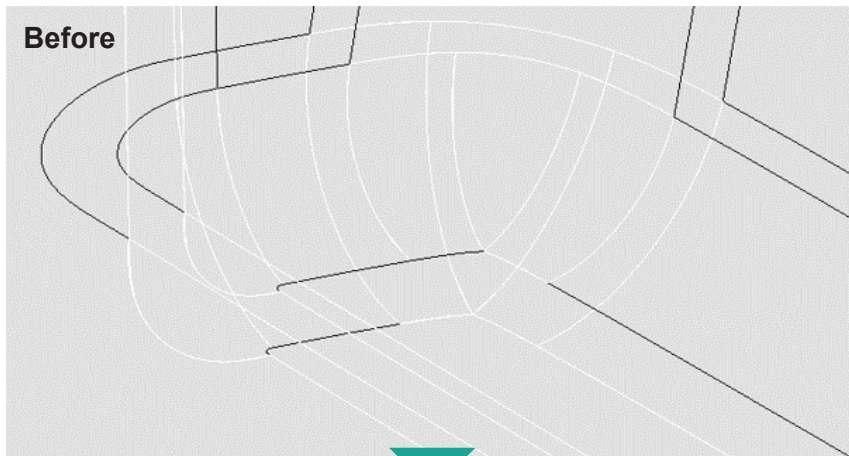
Benefit

- Reduced 80% of their data repair time
- Create more accurate development plans and estimations with uniformed data repair times

Product Used

- CADdoctor





Missing faces are no longer exist after translation with CADdoctor

CADdoctor's Data Repair and Translation

IBUKI Inc. decided to introduce Elysium's CADdoctor to reduce CAD data error repair time and to increase their 3D CAD data quality for the purpose of improving efficiency for the entire production process.

First, engineers checked 3D CAD data quality provided by customers with CADdoctor. The CADdoctor automatically sets the appropriate check items for CADmeister, so engineers do not need to manually select appropriate check items one by one.

The detected errors can be healed automatically in CADdoctor, avoiding the haste of repairing them manually. The CADdoctor is designed not to repair errors which can change the original geometry substantially that could be a risk of changing the design intent. Those errors can be checked by the engineers one by one and repaired easily with interactive healing. Once all the repairs are completed, CADdoctor exports the data in CADmeister data format.

Effect of CADdoctor

As the CAD data repair process became more efficient after the introduction of CADdoctor, engineers were able to focus more on design concept and value-added processes. Repair times of data received from customers were evened out regardless of the data quality, and as a result, IBUKI Inc. was able to estimate devel-

opment hours much easier and create development plans with more accuracy. IBUKI Inc. is planning to expand utilizing CADdoctor in the development phase and try to establish more efficient mold production processes that suit the corporate philosophy of "Fuunji of mold industry" by optimizing the use of functions of CADdoctor such as geometry simplification .

