

## BIG PAD - Real-time confirmation of each coordinated factory's situation

### Quickly visualize, share, and check production progress and troubleshooting



#### Customer

##### Takasago Co., Ltd.

- Takasago, Hyogo Prefecture, Japan
- Established in 1965. Main business includes extrusion manufacturing and assembly of resin parts. Takasago is focusing on their daily improvement activities with the slogan "Real-time Visualization."



#### Implemented product

##### Touch display "BIG PAD"

- PN-L705H (70V model) × 1 unit, PN-L703W (70V model) × 1 unit  
PN-L401C (40V model) × 3 units, wireless board PN-ZB03 × 4 units
- Sequentially implemented from July 2017 at head factory and office, Shoyo Factory, and Hanada Factory. Retailer: NTT-WEST BUSINESS FRONT CORPORATION Kansai Branch, Himeji Sales Office

## This is what we realized.

#### Challenges before implementation

At Takasago, our three factories coordinate and manufacture products. Products machined in the previous process are machined at another factory. We had used phone calls and e-mails to confirm the progress of work at each factory, but the time lag caused unnecessary preparation and delayed responses when trouble occurred.

BIG PAD was implemented at the head office and each factory so we could share progress. Coordination between factories has become smoother.

The system allows quick bidirectional transmission of work details just by touching the screen. Work efficiency has been improved.

Images from microscope inspections and work areas can be displayed in 4K quality, which is very useful for analyzing causes when trouble occurs.



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## Reasons for selection

### Conveying instructions with simple touch operations. Large, high-precision display of CAD drawings, etc.

We tried a BIG PAD demonstration model, proposed by the retailer, and tested screen sharing with each factory. We found that intentions could be conveyed easily with simple touch operations when instructing the work process or responding to trouble. The deciding factor was the ability of workers to operate the system intuitively and realize bidirectional real-time visualization. We also appreciated that the CAD screen, images from microscope inspections, and images from each work area could be displayed in high-precision on a large screen. This was extremely useful for inspections and analysis.

## Effect after implementation

### Bidirectional real-time visualization of head office and each factory.

### Quickly finding solutions when trouble occurs.

By implementing BIG PAD and building a system that allows us to share progress, coordinating work between the head office and each factory has become smoother. Camera images of the factory's work area are broadcast and displayed on a high-precision, large screen 4K BIG PAD. When trouble occurs, veteran workers can check the images and search for the cause from a remote location. The responding worker can make proper preparations before heading to the site so problems can be resolved quickly. All employees understand Real-time Visualization, which is the company policy, and propose improvements and ideas from the site. This has contributed to company vitalization.

## Future prospects

### Implementing BIG PAD has led to "work-style reform." Promoting further real-time visualization.

By implementing BIG PAD, we have cut down on waste and started "work-style reform." In addition to using BIG PAD at meetings and seminars to project CAD drawings, we hope to develop work improvement software based on the 4K BIG PAD so we can future increase real-time visualization. We also plan to implement BIG PAD at other sites where the system has not yet been introduced.

## Background of implementation

### Time lags during confirmation of progress between factories resulted in wasted preparation time and delays.

At our company, three factories cooperate in manufacturing resin hoses, etc. The parts made in the previous process are shipped to another factory, where they are further processed and finished into products. Until now, we checked the progress with phone calls and e-mails, but the time lag caused wasted time during preparations in the post-process as well as delayed troubleshooting. We were looking for improvements that would allow us to confirm the progress at each factory in real-time on a large screen. We also wanted to display high-precision images from microscope inspections and camera images of the worksite when trouble occurs on a large screen so we could analyze the cause quickly.



BIG PAD mounted on head office so each factory's situation can be confirmed



Operating BIG PAD with wireless connection tablet PC



Freely enlarging images of work area with touch operations