

# TKD Deploys Sophisticated Unified Messaging Service for Major Indonesian Mobile Operator

World-Class Dialogic® Technologies Enable Powerful UM Solution

## CASE SUMMARY

### Challenge

With a solid background in voice mail solutions and a thorough grounding in next-generation technologies, TKD decided to create a Unified Messaging System (UMS) to replace the carrier environments used in Indonesia, which required discrete systems for voice and video mail, email, fax, SMS, and conferencing.



### Solution

TKD chose a modular approach and created a highly scalable architecture, which supports GSM and CDMA wireless and fixed line networks, including SS7, along with a VAS platform for easy, multiple service management, and a UMS application. To implement the new unified system for one of the largest mobile operators in Indonesia, TKD chose the Dialogic® IMG 1010 Integrated Media Gateway with “any-to-any” network connectivity and the Dialogic® IP Media Server, a powerful software media server deployed on an IBM System x3650 rack mount server.

---

### Challenge

Since 1987, Trans Komunikasi Datanet (TKD) has been developing sophisticated telecommunications solutions for the Indonesian market based on world-class hardware and software and its own innovative technology. One of its earliest successes was with a voice mail application. “We saw the many excellent technologies developed by companies such as Dialogic,” explains TKD’s Director Mr. Eng Tjong, “and we decided to build on these and our own wide experience to extend our voice mail expertise into a unified messaging solution.”

Before the development of TKD’s unified solution, a separate system was needed for each type of service in Indonesia as in the rest of the world. A carrier that wished to provide voice mail, email, and fax capabilities, for example, needed a separate system for each service. Not only was this segregated environment costly since it necessitated using a great deal of specialized and sometimes redundant equipment, but it was also extremely expensive and time-consuming to administer. Adding new services meant adding an entirely new system; modifying and deleting services was awkward and difficult, requiring specialized personnel.

According to Mr. Eng Tjong, “we were determined to streamline this situation, making administering services efficient and cost-effective while providing a much more convenient unified interface for end users.”

# TKD Deploys Sophisticated Unified Messaging Service for Major Indonesian Mobile Operator

Case Study

World-Class Dialogic® Technologies Enable Powerful UM Solution

## Solution

TKD's approach was to both synthesize and modularize its challenging problem. The company decided on a three-pronged approach: a modular architecture (NG-VMS), a single platform that would allow a carrier to easily add, delete, and administer a variety of services (NG-VAS), and a unified messaging application to synthesize everything for the end customer (TKD-XE UMS). Overall, the unified solution is referred to as NG-VAS.

The basis of TKD's solution is its comprehensive modular architecture where each level of the architecture is specifically designed to be highly scalable. The architecture can also bring together in a single system many networks, interfaces, and features.

One of the principal advantages of NG-VAS is its ability to handle a wide variety of standard network types, including GSM wireless, CDMA fixed wireless, PSTN fixed wireline, and converged NGN data and internet. In addition, NG-VAS is capable of providing an extensive selection of end-user interfaces, such as web browsers, mini-webs, Microsoft® Outlook® email, voice mail with auto attendant, and fax. Functions supported include forwarding, notification via SMS, message retrieval, and direct and indirect access. Video mail, video portal, video conferencing, and IVVR capabilities are included along with more established messaging media such as voice mail, email, fax, voice portal, voice conferencing, IVR, ring back tones, background music, and SMS.

For more details on these functions and capabilities, see the [TKD website section on the NG-VAS platform](#).

## Dialogic® Technology Used To Implement NG-VAS

Dialogic® technology is used at critical points to implement NG-VAS. For example, the Dialogic® IMG 1010 Integrated Media Gateway and its any-to-any network connectivity allows the NG-VAS system to accept input from both multiple E1 digital lines and SS7 SDL links and then deliver SIP input to the internal IP-based system.

A second critical point in the TKD system at which Dialogic technology is utilized is the NG-VAS media server. This media server platform is powered by the Dialogic® IP Media Server, a carrier-grade, software-based, and highly scalable IP media server that TKD runs on an IBM System x3650 2U "rack-dense" rack mount server.

"We and our customers are very pleased with the Dialogic® products," commented Mr. Eng Tjong. "We have seamless gateway connectivity to the PSTN, which the IMG 1010 gives us, and excellent compatibility between the Dialogic IP Media Server software and the IBM hardware server that together deliver all the media resources we need to handle voice and video. We also chose to use IP MS because at the time we were creating the system, it was the only IP media server product that supported XML. The IPMS and x3650 work together so well that we have not been tempted to even try any other hardware because we have such an ideal and powerful combination now."

## Results

As of July 2007, TKD has successfully completed ten deployments of NG-VAS in five cities for one of the largest CDMA mobile operators in Indonesia, and the operator's subscribers are delighted. Previously, the mobile subscribers could only access voice mail from their own handsets via a voice call, and only a limited number of features were available. For example, they could not manage their voice mail greeting, and fax messages and email were not available on the voice mail interface.

"The operator is very pleased with the new system, which is very reliable. The operator began by deploying the basics, and is now gradually introducing more attractive solutions to increase subscriber loyalty and provide a competitive advantage," reports Mr. Eng Tjong. "We are the first company to offer this unified system in Indonesia, and we look forward to further successful deployments and continued enhancements with the solid combination of our technology and Dialogic products."

# TKD Deploys Sophisticated Unified Messaging Service for Major Indonesian Mobile Operator

World-Class Dialogic® Technologies Enable Powerful UM Solution

## About TKD

Trans Komunikasi Datanet (TKD) was established in 1987 and is now one of the leading research and development companies in Indonesia, specializing in the telecommunications industry. As a solution provider, TKD specializes in telecommunication network infrastructure and value-added service products.

For more information, visit <http://www.tkd.co.id>.

## About Dialogic Corporation

Dialogic Corporation is a leading provider of world-class technologies based on open standards that enable innovative mobile, video, IP, and TDM solutions for Network Service Providers and Enterprise Communication Networks. Dialogic's customers and partners rely on its leading-edge, flexible components to rapidly deploy value-added solutions around the world.

For more Information, visit [www.dialogic.com](http://www.dialogic.com).

[www.dialogic.com](http://www.dialogic.com)

**Dialogic Corporation**

9800 Cavendish Blvd., 5th floor  
Montreal, Quebec  
CANADA H4M 2V9

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH PRODUCTS OF DIALOGIC CORPORATION OR ITS SUBSIDIARIES ("DIALOGIC"). NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN DIALOGIC'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, DIALOGIC ASSUMES NO LIABILITY WHATSOEVER, AND DIALOGIC DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF DIALOGIC PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

Dialogic products are not intended for use in medical, life saving, life sustaining, critical control or safety systems, or in nuclear facility applications.

Dialogic may make changes to specifications, product descriptions, and plans at any time, without notice.

This document has been prepared in good faith and is based on information which we believe is accurate and reliable. However, because this information has been derived from a number of different sources, including third parties, no warranties or assurances, express or implied, can be given to the effect that this report is complete and error-free. Dialogic and Trans Komunikasi Datanet (TKD) disclaim all implied warranties, including warranties as to merchantability or fitness for a particular purpose and excludes all liability (including liability for negligence) in relation to your use of this document.

Dialogic is a registered trademark or trademark of Dialogic Corporation. Microsoft and Outlook are registered trademarks of Microsoft Corporation in the United States and/or other countries. The names of other companies and products mentioned herein are the trademarks of their respective owners. Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement their concepts or applications, which licenses may vary from country to country. Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at the address provided above. Any authorized use of Dialogic's trademarks will be subject to full respect of the trademark guidelines published by Dialogic from time to time and any use of Dialogic's trademarks requires proper acknowledgement.

Information about TKD has been provided by TKD for this case study.