

## DOWNLOAD INNOVATION



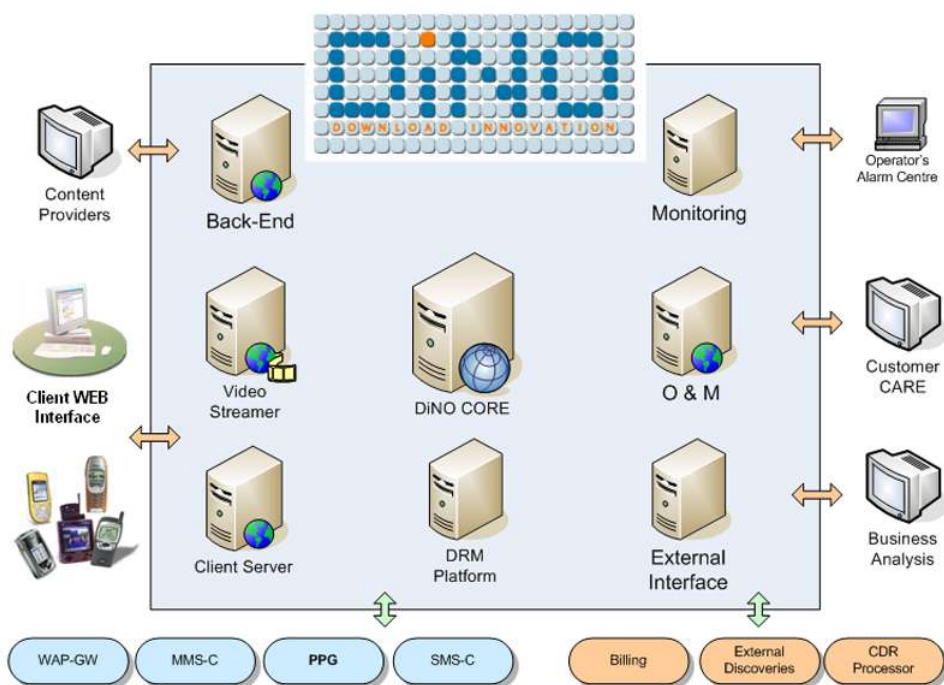
### DiNO – Download Innovation

DiNO – Download Innovation is a Content Management and Delivery Platform that currently serves over 50 million users, being one of the industry's most robust platforms available for mobile operators, wireless ASPs or virtually any other area requiring effective content management and delivery. This platform provides users with fast and simple access to a vast range of content types and applications. Providing the quickest possible server response times encourage clients to browse, search and acquire all types of content, from a simple monophonic ring tone to the most complex Java application available.

Built on years of experience in managing and delivering data to mobile handsets, DiNO uses a combination of the most recent IT techniques and open source application servers in order to obtain the best possible return on investment. For the mobile operators in which this platform is actively servicing their customers, it has already proven to increase the overall volume of traffic generated and raise the number of premium content acquisitions.

#### Overall Architecture

DiNO was designed to be highly redundant and scalable in order to provide the most effective service to the operator's customers and content providers. Furthermore, by implementing innovative techniques that reduce database activity to the bare minimum, the platform is able to provide the quickest response times possible. As illustrated in the following figure, the platform is capable of interfacing with most types of external systems enabling a seamless integration with the operators' existing IT network.





## Supported Content Types

Even though DiNO is designed to be used in a mobile network scenario it can also be effectively deployed in a non-telecommunication world since is capable of ingesting, storing, managing and delivering most types of content. Currently the platform recognizes the following content types:

- Ring tones (Polyphonic, Monophonic, Real tones)
- Music (samples or Full Track)
- Image (Operator Logos, Wallpapers)
- Screensavers
- Themes
- Video (download and streaming)
- Java, Symbian and SmartPhone applications (including games)

## Discovery Mechanism

One of DiNO's most impressive features is the ability to actively deliver lightning fast responses. This feature alone has proved to increase the overall user experience and consequently raise generated traffic and daily downloads. The platform maintains a list of configured handsets and respective characteristics (RDF) in order to send data in the most adequate format supported by the handset. DiNO currently sends its data in WML1.1, XHTML Mobile Profile and HTML while converting all graphical content on the fly.

## Content Delivery

Having mobile operators has the platform's main target, it is equipped with the essential delivery methods and protocols that are typical in the wireless domain. Most content can be tagged for delivery using Digital Rights Management mechanisms such as Forward Locking, Combined Delivery and Separate Delivery (including Super Distribution). DiNO is able to deliver content using any of the following:

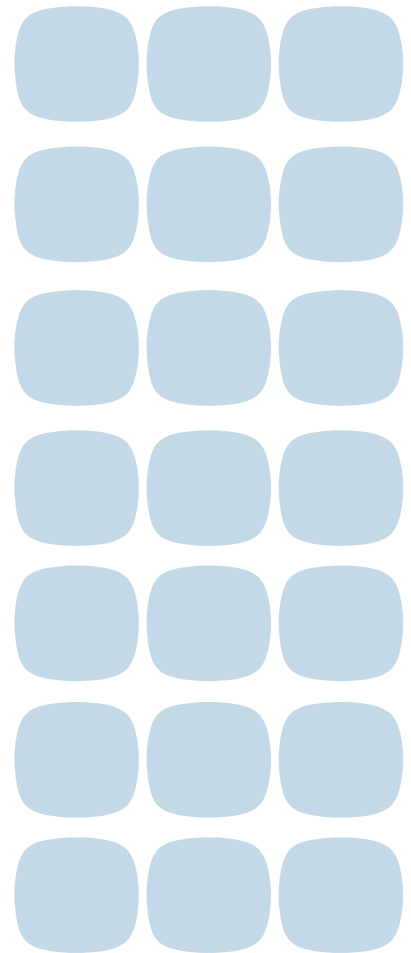
- OMA/MIDP download
- http download
- SMS OTA
- WAP Push
- Audio/Video Streaming

## Billing

DiNO provides the necessary mechanisms to communicate in real time with the operator's existing billing systems. Currently, the platform interacts with external billing systems through OSA Charging, direct socket usage and remote procedure calls. However, the plug-in architecture of the billing mechanisms enables other protocols to be easily included. Of course, the traditional CDR generation is also maintained and fully supported.

## Operation and Reporting

The operator must have access to platform data for analysis and statistical purposes and for this DiNO provides two major report groups. One group is used to obtain real-time data that is commonly used for customer care scenarios while the other group is comprised of a series of data warehouse style reports that provide the operator with a wealth of statistical and commercial reports.



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### ADDITIONAL INFORMATION

For further information on how DiNO can successfully become part of your content Management and Delivery solution, please contact:

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