

Walking together with
EGC&C's SOLUTIONS

Realizing Globally Connected IPTV / A New Paradigm for IPTV



Realizing Globally Connected IPTV

As a digital convergence solution vendor, EGC&C is developing and providing various market-leading services with its outstanding technologies in the fields of IPTV, Internet broadcasting, and CDN.

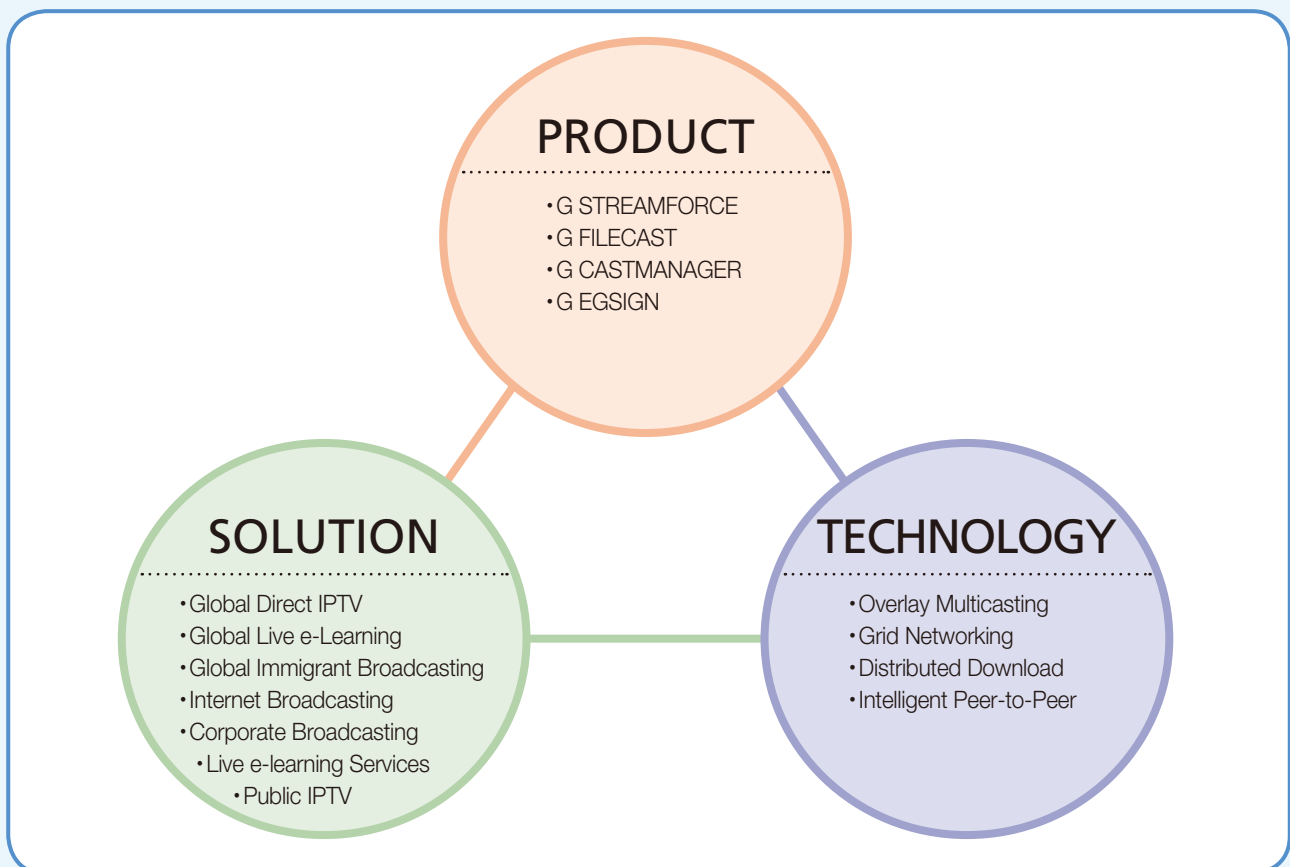
With its core technology of reducing network traffic patented in seven countries, EGC&C is providing total broadcasting system and consulting services for IPTV and online broadcasting service operators. Its solutions include G STREAMFORCE and G FILECAST, which allow multiple users to access high-definition video in real time.

EGC&C provides differentiated services ranging from high-definition live broadcasting to interruption-free broadcasting over the Internet. EGC&C solutions can be deployed for various applications such as global IPTV broadcasting, live e-learning, corporate broadcasting, public IPTV, videoconference, etc.

EGC&C also embraces the fast changes in the broadcasting market to enable cost-efficient, high-definition broadcasting over wired and wireless networks. It develops new technologies for 3D broadcasting and mobile IPTV.

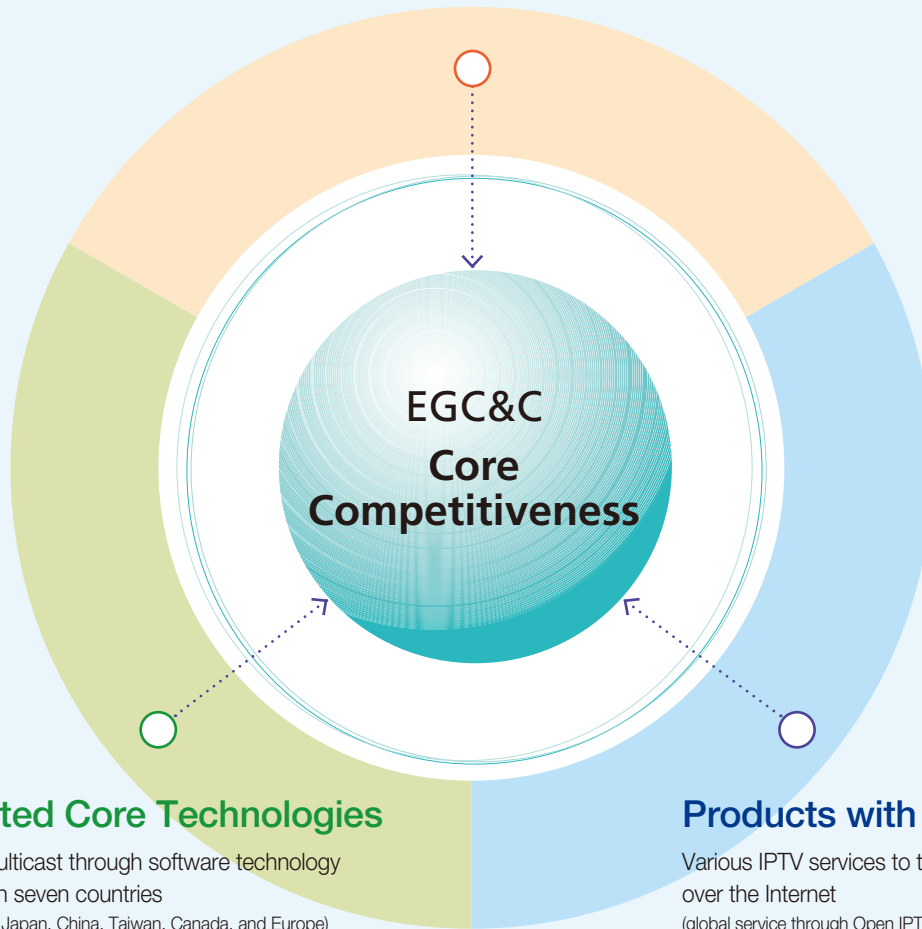
EGC&C has recently started global live e-learning services that are guaranteed to reach learners sans geographic barriers; it has been selected for the 3D contents development project funded by the Korea Creative Content Agency.

As a total solution provider, EGC&C is committed to leading the IPTV industry by providing ultimate values for customers and delivering differentiated technologies.



Minimum Network Cost

Minimum 90% cost reduction compared to the existing methods
(combination of overlay multicast and hybrid grid CDN)



Realizing Globally Connected IPTV
with differentiated solutions minimizing network traffic

STREAMFORCE



○ Description

Contents transmission server optimized for the live streaming of high-definition, large-sized contents through the use of server load-balancing and overlay multicasting technologies; the content provider can stream out large-sized contents over the Internet with the same effects of the CDN.

○ Features and Advantages

- Support for various CODECs - H.264, MPEG2/4, ASF Format, etc.
- Live high-definition service
- Server traffic load balancing and redundant server structures
- Hybrid Contents Delivery Network (CDN)
- Intelligent Peer-to-Peer (IP2P)
- Global Server Load Balancing (GSLB)
- Automated Network Load Balancing (ANLB)
- Uninterrupted services through the edge server on another ISP network in case of an error on an ISP network
- Overlay multicasting for client accesses on the same network
- Frame Balancing Control (FBC)
- Encapsulated packets (unicast) enable multicasting without using a multicast router
- Reliable streaming to all group members through transmission of multi-streams per user group (or multicast group)

○ Technology

- Overlay Multicasting
- Distributed Download
- Dynamic Load Balancing
- Reliability
- Grid Networking
- Dynamic Routing
- Quality of Service
- Intelligent Peer to Peer

CAST365PLUS



○ Description

Internet live broadcasting server designed for live streaming over the Internet or intranet through the use of patented overlay multicasting technology.

○ Features and Advantages

- Achieves effects of transmitting contents to all group members by transmitting a single stream to one user group (or multicast group)
- HTTP 1.0 protocol support
- Reduced bandwidth usage through the use of single stream by the media server
- Encapsulated packets (unicast) enable multicasting without using a multicast router
- Service is possible only with the client module without a server version
- Group multicasting service for multiple PC connections
- Easy-to-use recording options
- Direct service of recorded contents
- Complete overlay multicasting on most network types including LAN, NAT, and DHCP

○ Technology

- Grid Networking
- Distributed Download
- Dynamic Load Balancing
- Reliability



○ Description

IPTV VOD contents transmission server optimized for VOD streaming of high-definition, large-sized contents through the use of server load-balancing and overlay multicasting technologies; the content provider can stream out large-sized contents over the Internet with the same effects of CDN.

○ Features and Advantages

- Supports various CODECs - H.264, MPEG2/4, ASF Format, etc.
- Server traffic load balancing and redundant server structures
- Global Server Load Balancing (GSLB)
- Automated Network Load Balancing (ANLB)
- Uninterrupted services through the edge server on another ISP network in case of an error on an ISP network
- Intelligent Peer-to-Peer (IP2P)
- high-definition VOD service

○ Technology

- Grid Networking
- Distributed Download
- Dynamic Load Balancing
- Reliability



○ Description

Unlike Digital Information Display (DID), which places emphasis on the hardware aspect, G EGSIGN is a true combination of software, hardware, messaging, and networking technologies. Digital signage delivers various types of information including commercials through LCD, LED, and Plasma displays.

○ Features and Advantages

- Search by media file type
- Media editing, deletion, and management
- Classified account levels – Super User, Contents User, and Normal User
- Media source addition and deletion
- Update of registered media file information
- Editing of media file before registration (layout creation)
- Selection of media file location type (facility, event, and default location)
- Selection of media file resolution, background image, background audio, and position (left/right/top)
- Schedule management in XML format (Daily/Weekly/Monthly)
- Text broadcasting

CASTMANAGER



○ Description

Provides general control over the broadcasting system such as scheduling, content management, and emergency broadcasting and functions as contents manager.

○ Features and Advantages

- User management
- Schedule group management
- Group-based user management
- Contents management
- File uploading/downloading management
- Schedule view and management (Daily/Weekly/Monthly schedule view, Schedule creation, Caption creation)
- Emergency broadcasting management
- Schedule broadcasting statistics (Daily/Weekly/Monthly)
- Text broadcasting statistics (Daily/Weekly/Monthly)
- Equipment statistics (Daily/Weekly/Monthly)
- Update management (File registration, Template list/file creation, Log data)

EGMONITOR



○ Description

Conducts status monitoring on hardware, software, and status of each server; the operator can remotely view the monitoring result and receive an error and alarm report.

○ Features and Advantages

- Hardware error and status monitoring
- Account level-based login
- Performance data report
- HTTP/HTTPS-based standard support (Head, Get, and Post requests)
- Visual warning in case of status changes and warning occurrence
- Error monitoring, system configuration, and resource management
- Remote control access through the use of the plug-in feature (for Restart and Shutdown)
- APIs for customer UIs

○ the Advantages of Our Core Technologies

Overlay Multicasting	Multicast packet transmission through IP tunneling over the public network regardless of the hardware configuration
Grid Networking	Load balancing and improved quality through streaming sharing on both the local network and the public network
Distributed Download	Supports data partitioning for distributed downloading resulting in faster downloading rate and stabler services
Dynamic Routing	Recommended servers for the best network rates and stable services
Dynamic Load Balancing	Distributes network traffic to the servers Stable server status and guaranteed network quality
Quality of Service	Uninterrupted services regardless of network status
Reliability	Interruption-free services by switching the origin server (or contents server) into operator when the streaming proxy server is down
Intelligent Peer to Peer	Management of peer-to-peer transmission rates, packet amounts, and locations



Optimal multicasting and grid network for high-definition, stable streaming services
through Automatic load balancing for the servers and utilization of idle resources of the clients

○ Application Areas

Corporations	<ul style="list-style-type: none"> • Corporate broadcasting • Employee training • Customer services • Videoconferences
Government	<ul style="list-style-type: none"> • Public policy promotion • Employee training • Meeting and event broadcasting • Disaster broadcasting
Contents / Service Provider	<ul style="list-style-type: none"> • Contents provider's broadcasting services • Broadcasting company's global businesses • Webcasting of media outlets and broadcasting companies • Customer services in shopping malls, hospitals, etc. • Pay TV for hotels and motels • Religious broadcasting (to the globe)
Education Service Provider	<ul style="list-style-type: none"> • Global live e-learning • Live e-learning courses by native speakers • Live e-learning service • Internet learning • Public learning TV • Telephone and video English learning courses • Children's English courses taught by native speakers

○ Milestones

- 2010 ○
- 04. Built and extended Guro-gu Office Public Broadcasting System
 - 04. Selected for the joint R&D center business sponsored by the Korea Creative Content Agency (in the field of 3D images)**
 - 02. Built pilot IPTV services for the Seoul Metropolitan Government
 - 01. Kim Do-Young, former director of Microsoft Korea, appointed CEO
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- 2009 ○
- 12. Built global contents media hub center for Daegu City**
 - 12. Built live broadcasting system for customs office in Daejeon Government Complex
 - 08. Delivered medical service channel for KT QOOK TV (Channel No. 797)
 - 05. Delivered first project for human resource development IPTV for Peruvian Government (USD 170 million)**
 - 04. Built IPTV system for the public news system in the No. 9 Subway Line
 - 02. Built the Guro-gu Office Public IPTV system
 - 02. Built the Seongbuk-gu Office Public IPTV system
 - 01. Built the Eunpyeong-gu Office Public IPTV system
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- 2008 ○
- 12. Participated in the IPTV commercial service kick-off ceremony, held an exhibition at the Public IPTV Service section (visited by Korean President Lee Myeong Bak)**
 - 11. Received human resource development IPTV project from Peruvian Government (USD 1 billion)**
 - 11. Completed tests on live IPTV broadcasting to the 430,000 bedrooms of Leo Palace, Japan (through the use of the existing network and existing STBs)**
 - 09. Signed a contract with Broad TV Japan on the opening of a Korean branch
 - 07. Built public IPTV system for tbs (Seoul Traffic Broadcasting System)
 - 06. IPTV Industry Association (IIA) founded (by the Korean Ministry of Knowledge Economy)
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- 2007 ○
- 12. Built IMC Tokyo POP
 - 11. Built KT GMH (Global Media Hub)
 - 06. Signed an MOU with MPT, Japan with regard to the hotel IPTV project**
 - 02. Built KT DCP (digital cinema advertisement) service
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- 2006 ○
- 10. Signed an MOU with KT and MPT with regard to the Live IP Streaming project
 - 08. Selected as a participant in Microsoft Korea ISV Empowerment Lab**
 - 08. Delivered groupware for the Korea Meteorological Administration and Internet broadcasting system (CAST365PLUS) for Busan University
 - 04. Delivered "CAST365 IStream" for the administration office of the Gwacheon Government Building Complex
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- 2005 ○
- 06. Delivered "CAST365PLUS" for the Commission on Human Rights**
 - 03. Released Cast On Demand (COD), a network load-balancing solution

Domestic Patents

- VIDEO DATA TRANSMISSION CONTROL SYSTEM FOR NETWORK AND METHOD THEREFORE
Registration number : 100701032
- Method and System for Voting Optimum Route in Multicasting
Registration number : 100628339
- Method of intermediating multicasting signal for multicasting embodiment
Registration number : 100437860
- Method and System for Virtual Multicast Networking
Registration number : 100579321
- METHOD FOR BROADCASTING DATA USING BASE STATION THAT SUBSTITUTED FOR REPLAY STATION
Registration number : 100374475
- A system and method for providing internet broadcasting data based on hierarchical structure and distributed IP multicasting
Registration number : 100342975
- The system and method for granting the sentence structure of electronic teaching materials contents identification codes, the system and method for searching the data of electronic teaching materials contents, the system and method for managing points about the use and service of electronic teaching
Registration number : 100893629
- The system and method for generating indexing information of multimedia data file using vocal data and retrieving indexing information of multimedia data file
Registration number : 100929688
- APPARATUS FOR CAPABLE OF AN IMAGE DISPLAY
Registration number : 100928731

Foreign Patents

- Internet Broadcasting System/Method Using Hierarchical Transmission
Registered nation : USA, Japan, China, Taiwan, Canada, Europe
- Method of intermediating multicasting signal for multicasting embodiment
Registered nation : USA, Japan
- System for virtual multicast network deployment
Registered nation : Japan
- Method and System for Voting Optimum Route in Multicasting
Registered nation : China



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