

floorViz™ for Gaming



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Introduction

This paper focuses on slot floor analytics and how data visualization and visual analytics is changing the world of gaming analytics for casino operators. Unlike traditional reporting tools, gameViz™ enables users to be inquisitive about their data, see a multitude of data points simultaneously, identify patterns and meaningful relationships, and gain new insights which were not previously possible.

Welcome to floorViz™ for Gaming

floorViz is the casino floor analytics module of BIS²'s gameViz™ solution. floorViz was specifically designed for casino operators to enable them to see which areas of the floor and machines are working and which ones are not. With floorViz, as a slot manager you will have the ability to:

- Quickly identify underperforming machines so you can quickly take action to reconfigure the gaming floor.
- Build a picture of how and how much your players are spending on participation games so you can directly improve profit.
- See immediate ROI from new machines and machine moves by comparing two pictures of the floor, not just machine numbers.
- Share activities with other executives in a visual form to better understand the complex science of slot floor management and aid in capital requests and ROI analysis.
- Visually see patterns of play such as, how the end machines are doing compared to center machines, and how the machines in walkways and near restrooms and restaurants are doing. This type of detail can be hard to see when you are simply using machine and bank numbers. Also, easily see how location affects performance.
- Easily export the data to Microsoft Excel® for additional Analysis.



Introduction to gameViz™

Today's business environment drives an unprecedented need to understand, analyze and take action on the ever-increasing mountains of data. This, coupled with the need to make decisions faster, and within a more complex environment, is resulting in casino operators demanding better tools for business analytics.

In response, BIS² has created Super Graphics, which represents the next generation of advanced data visualization tools for strategic, operational, and analytical users of gaming data.

The BIS² Super Graphics (contained within gameViz™) enable users to understand and take action on their gaming data in a new way. Users can see a large amount of data points simultaneously to understand patterns, identify meaningful relationships, and gain new insights which were not previously possible.

Designed to improve casino revenue and profit performance, gameViz™ can be applied to most areas of your gaming business and consists of four key modules:

1. **Revenue & Customer Analytics (aimViz)** – get new insights as to the most profitable customers and those which can be 'tapped' for additional revenue and profit.
2. **Gaming Floor Optimization (floorViz™)** – see which areas of the floor and machines are working and which ones are not. Identify which machines customers like to play, and when (market basket analysis). Identify over or under performing machines and learn how location based analysis can be applied.
3. **Property Yield Management (propertyViz)** – maximize revenue and yield across the divisions and across properties. Easily see customers who play at one property, when and how much they play at other properties.
4. **Advanced Gaming Floor Analytics (slotViz™)** – see which downloadable games/combinations are most popular, when and where. Easily assess the ROI and improvement opportunities with networked games and community gaming.

gameViz™ is a powerful, easy-to-use, gaming industry data visualization solution that allows casino operators to directly query their data, and enable them to see what they need to do.

Join the growing BIS² User Community and leverage a new paradigm in visual analytics—gameViz™.

Standard floorViz™ Super Graphics

floorViz™ for gaming contains two powerful Super Graphics:

1. Inspatial – Slot Floor Super Graphic
2. Temporal – Time Based Super Graphic

1. The Inspatial Super Graphic

With the Inspatial Super Graphic you can see how your slot floor is performing in a single picture (Figure 1). With the Inspatial Super Graphic heatmaps, see and analyze the performance of the whole floor, areas of the floor, banks of machines, and even groups of machines or individual machines. You can analyze performance over time and animate the Super Graphics to show changes in play over time — all in one Inspatial Super Graphic.

The Inspatial Super Graphic is loaded with Business Performance Drivers (BPDs) that enable you to easily see what is happening and when, on your floor. Examples of these BPD's are net win per day, coin-in, handle pulls, average bet and utilization percent. The powerful gameViz™ query engine enables you to incorporate restrictions (i.e. filters to the data) such as manufacturer, denomination or machine type.

By using the add-on advanced configuration tool called vizMaker, power users or analysts are able to create their own additional Super Graphics from any data available in your database. There is no need to call BIS² to add another metric or new report; you have the power to manage the tool yourself and make changes as your business changes. You can also combine your marketing player data using the aimViz module and instantly create mailing lists and customer profiling on the slot floor.

Figure 1 – The Inspatial Super Graphic

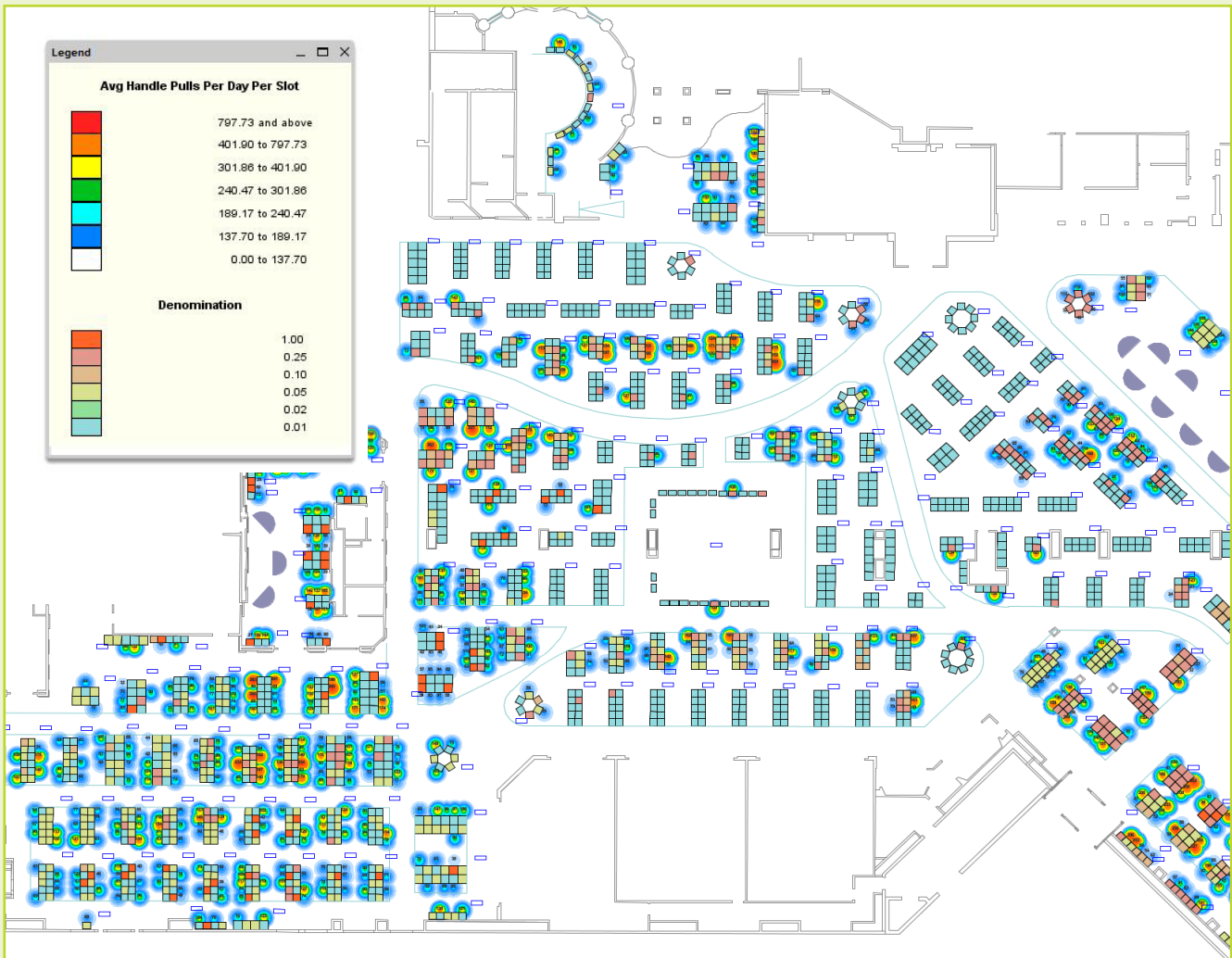
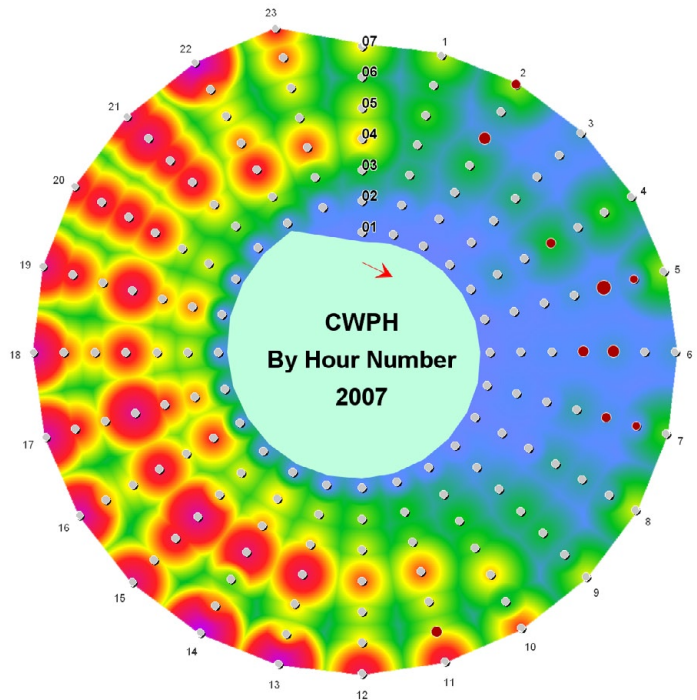


Figure 2 – The Temporal Super Graphic

The Temporal Super Graphic to the right shows Customer Count Per Hour (CCPH).

The numbers on the outside of the circle are hours in the day (e.g. 1 a.m., 2 a.m., 3 a.m., etc. through to 22 (i.e. 10 p.m.), 23 (11 p.m.)) and day 1 is the inner most number spiraling out clockwise to day 7.

The “red” heatmap color shows high customer count and the “blue” heatmap shows low customer count.



2. The Temporal Super Graphic

The Temporal Super Graphic shows machine data over time (Figure 2).

Utilizing the power of the Temporal Super Graphic, you can view time of day, day of week, and week of year patterns, in play or revenue.

With the Temporal Super Graphic, users can easily change the business metric shown and can apply single or multiple restrictions (i.e. filters to the data) to gain deeper insights into the patterns of play for particular types of machines, manufacturers or denominations.

Each Temporal Super Graphic can be viewed to show patterns for hours during the day (as in shown in Figure 2), days of the month and weeks of the year.

The tool is great for analyzing labor costs based on what time of the day your casino is getting the majority of it’s revenue, or use handle pulls to see when the majority of activity is happening on the floor. You can restrict the data to only show play for a section of the floor or only show one denomination of machines. You can use the tool to analyze machine play patterns and then compare patterns for different groups of machines to create the optimum machine mix on your floor.

Bridging the Gap between Marketing and Slots

You have the option to combine floorViz with the power of aimViz, the gameViz™ marketing analytics module. Adding aimViz to your product suite will allow you to market much more effectively to slot

players, by observing their play behaviors on the slot floor. Some examples of this are:

- Running marketing promotions based on slot floor performance.
- Marketing to people who only play a certain machine type or always play in a certain area of the floor.
- Look at the slot play of players segments and club levels.
- Use slot floor data to instantly create mailing lists from within floorViz, simply select a group of machines, click the mailing list button and you are done!
- Create mini-casinos within areas of your casino and market to players in each group separately.

We are very excited about gameViz’s state-of-the-art technology as it will take our analytics to the next level. BIS² is installing the software on our existing data warehouse with no impact on our daily operations. I am very impressed with the rapid installation process and the ease of configuration of the gameViz software.

Kirk Golding, Silverton Casino VP of Information Technology

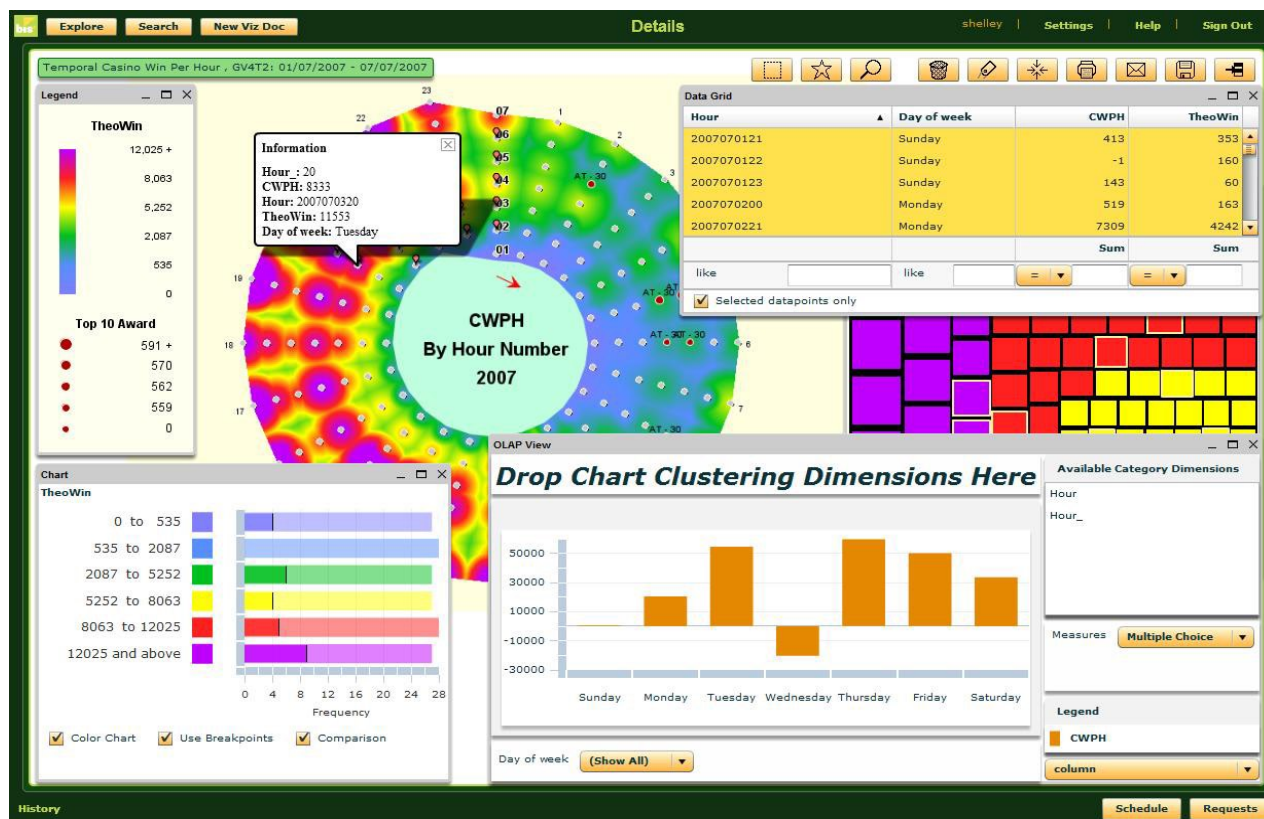
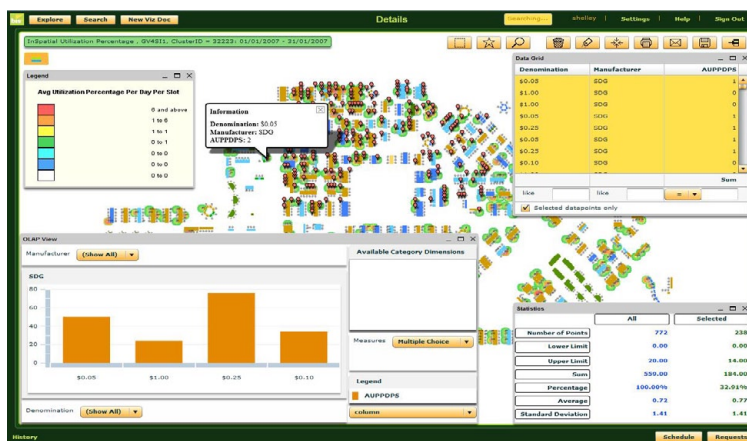
Key Points Summary

- floorViz™ is the casino floor analytics module of BIS²'s gameViz Solution.
- floorViz™ was specifically designed for casino operators to enable them to see which areas of the floor and machines are working and which ones are not.
- With floorViz™ identify which machines customers like to play, and when (market basket analysis). Identify over-or under-performing machines and learn how location based analysis can be applied.
- Traditional BI tools simply lack the necessary power to handle the ever-growing volumes of gaming patron and slot machine data. Gaming operators must now seek out the new paradigm in visual analytics - Super Graphics - available within floorViz™.

As an analyst, I see a wide variety of analytical tools. BIS² Super Graphics is a product that enables corporations to reap the value in their business data by bridging the gap in the last foot from pixels to the brain.

Leading BI Analyst & Market Commentator

gameViz contains highly interactive functionality which allows a user to easily search, view, and interact with the Super Graphics and the underlying data.



More About gameViz™

gameViz™ is a gaming industry-specific data visualization tool that allows you to directly query your data and see the results visually using innovative and powerful Super Graphics (Figure 3).

Join the growing BIS² User Community and leverage a new paradigm in visual analytics—Super Graphics.

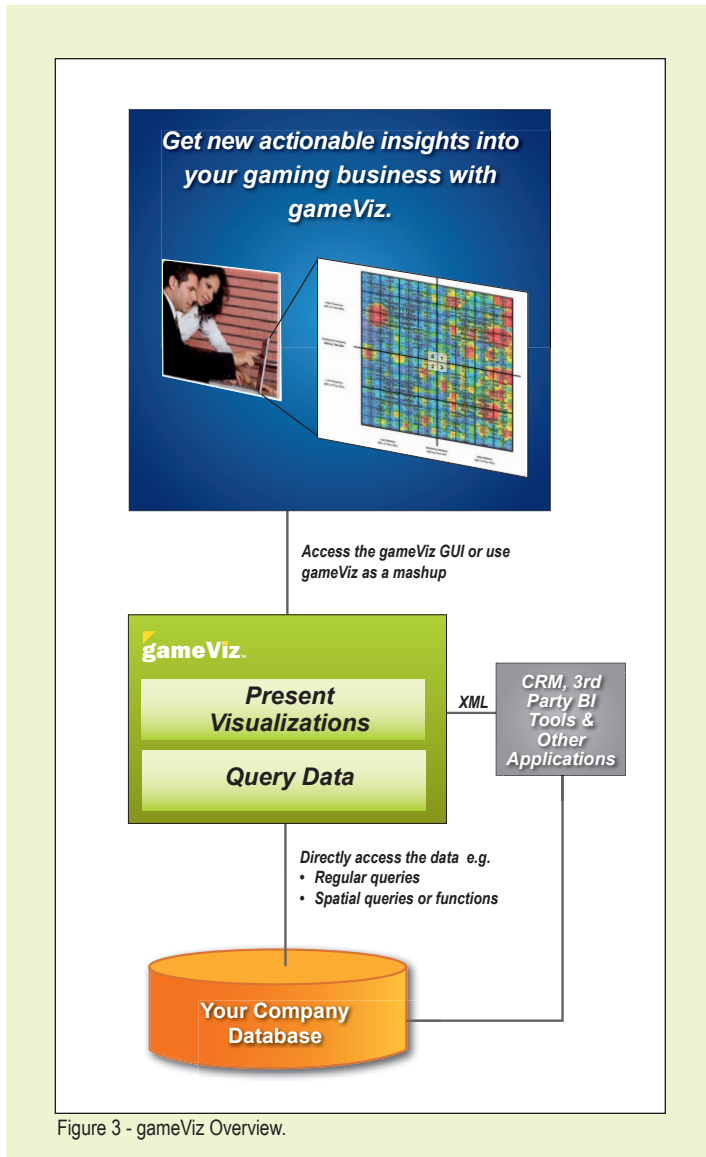


Figure 3 - gameViz Overview.

TOP 10 REASONS TO CHOOSE gameViz

1. Unique visual presentation methods - allows users to comprehend a multitude of data simultaneously in a natural and easy-to-use way. Also enables users to capture their business in one single picture and then look at relevant detail where appropriate.
2. Extensive and expanding visual library - extensive and expanding library of Super Graphics that have built-in data visualization expertise to enable users to create and use meaningful Super Graphics.
3. Framework for powerful industry solutions - as a generic tool, gameViz provides a strategic and operational intelligence framework for powerful and value-based industry solutions.
4. Easy-to-use powerful technology - simple, easy-to-use graphical interface that allows users to directly act on the data within the context of the advanced data visualization.
5. Unique underlying algorithms - unique and patent pending algorithms that translate data and business performance drivers into easy to understand and useful visualizations.
6. Utilizes industry databases - enables an organization to get more value from its existing investment in its industry data warehouse. gameViz interrogates the database directly without the need to create a separate database or cubes.
7. Rich Internet Application (RIA) - web-based enterprise software that is deployable with only a URL.
8. State-of-the-art technology - allows enterprises to use the gameViz client side Adobe® Flash® application or the enterprise's own mashup with the gameViz server side application.
9. Service Oriented Architecture (SOA) - built using J2EE technology with USEful™ and RESTful interfaces and deployed on IBM WebSphere® Application Services or JBoss EAP.
10. Leverages your existing investment in BI tools - gameViz has been designed to work with most other major BI tools. gameViz provides the big picture whilst other BI tools can provide more specific detail if required. In addition, you can export cluster groups into your BI tool(s) for more in-depth analysis.

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