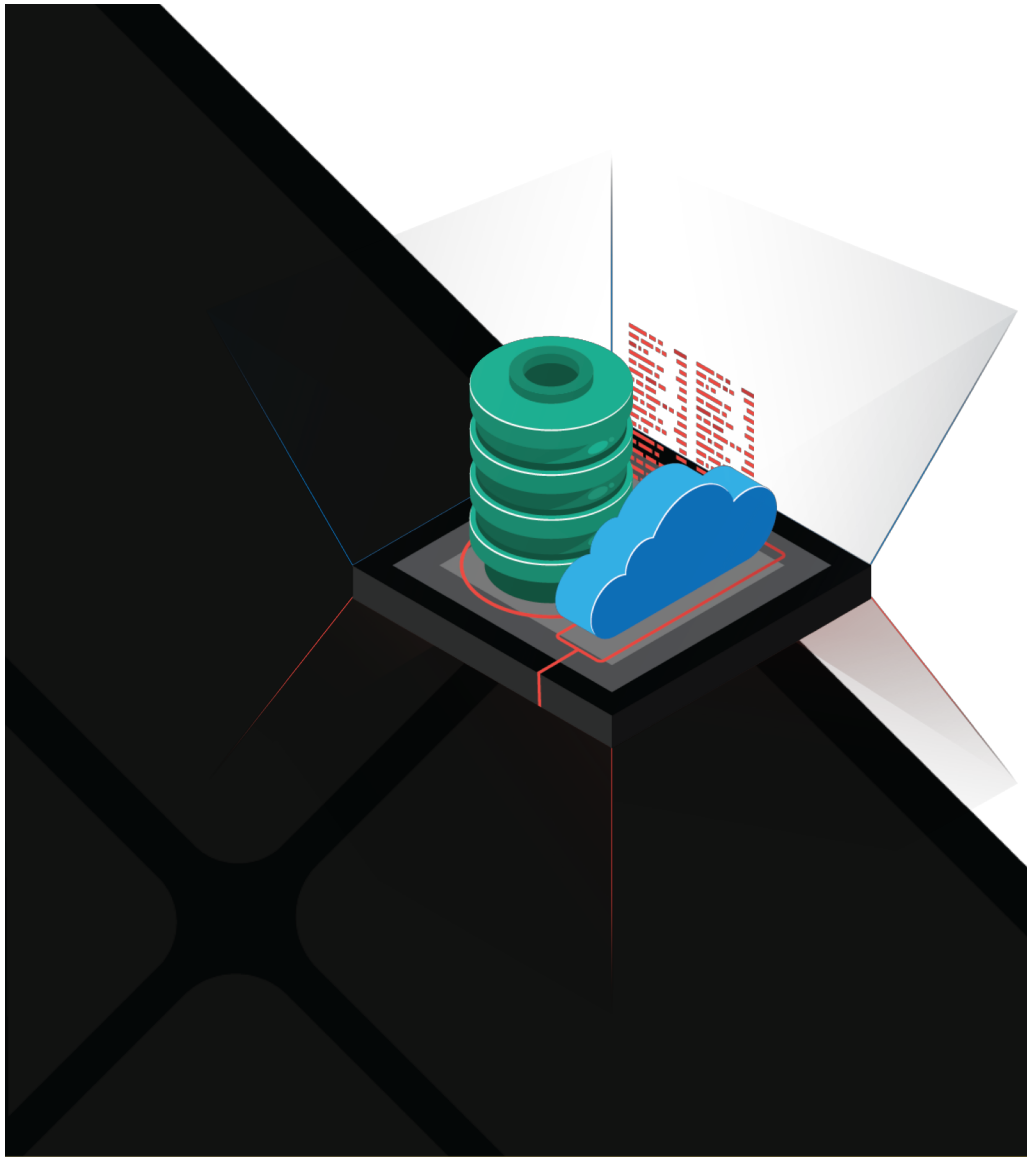
2019 Cyber-Augmented Operations Division Spring Conference

www.asteriholdings.com



Using Data Analytics to Optimize Content Effectiveness

Steve Gray's Career

Mathematician & Computer Scientist

Developed graphical displays and C&C systems for the Strategic Defense Initiative.

Heavy Iron Studios Founder (sold to THQ)

Steve's *Lord of the Rings* games at Electronic Arts generated >US$1B at retail

Head of Production Tencent Games China 2009 – 2017

2017 revenue $15.6B

Under Steve, market share grew from 15% to 65%

Asteri Founder & CEO

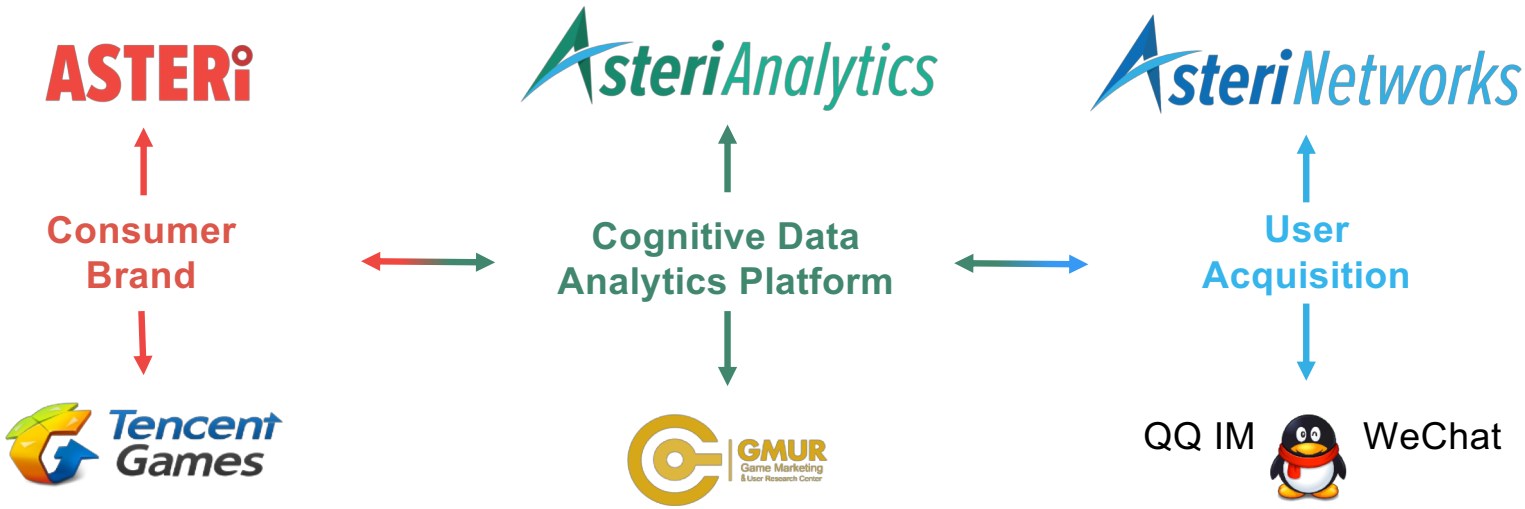
AIR FORCE GLOBAL STRIKE COMMAND
cyber innovation center
Collaboration • Research • Technology
CITY OF SHREVEPORT
UNION • JUSTICE
CONFIDENCE
LOUISIANA

How Did This Work At Tencent?

Steve Gray was the principal architect of Tencent Games' data-driven IP development, publishing and operations method which drove Tencent's China market share from 15% to **65%**.

Asteri's solution combines web, mobile and social media platforms to provide a zero cost customer acquisition solution.

Our revolutionary data analytics platform enables the reliable development, publishing & operation of online entertainment.



Predictive Audience Analytics™ Platform

Entertainment

Client/Server

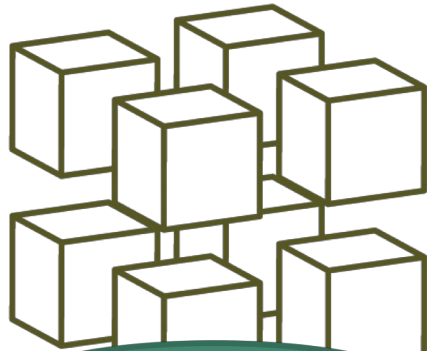
Analytics

Server Side

Client Side

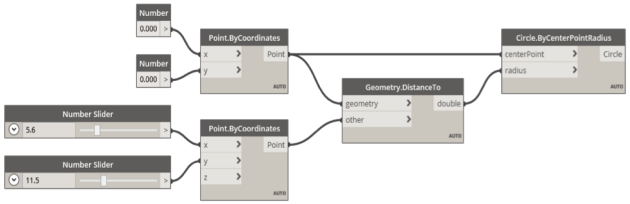
TELEMETRY FROM ALL PLATFORMS AND ENVIRONMENTS

SCALABLE AND ELASTIC MICROSERVICE ARCHITECTURE



HIGH AVAILABILITY TELEMETRY DATABASE

real-time dashboards



FLEXIBLE VISUAL PROGRAMMING ENVIRONMENT FOR RAPID ITERATION OF **DESCRIPTIVE**, **DIAGNOSTIC** & **COGNITIVE ANALYTICS**

Business Level Metrics

Key Performance Indicators (KPI) are needed to maximize success.
KPIs apply to all businesses but Apps have specific metrics.

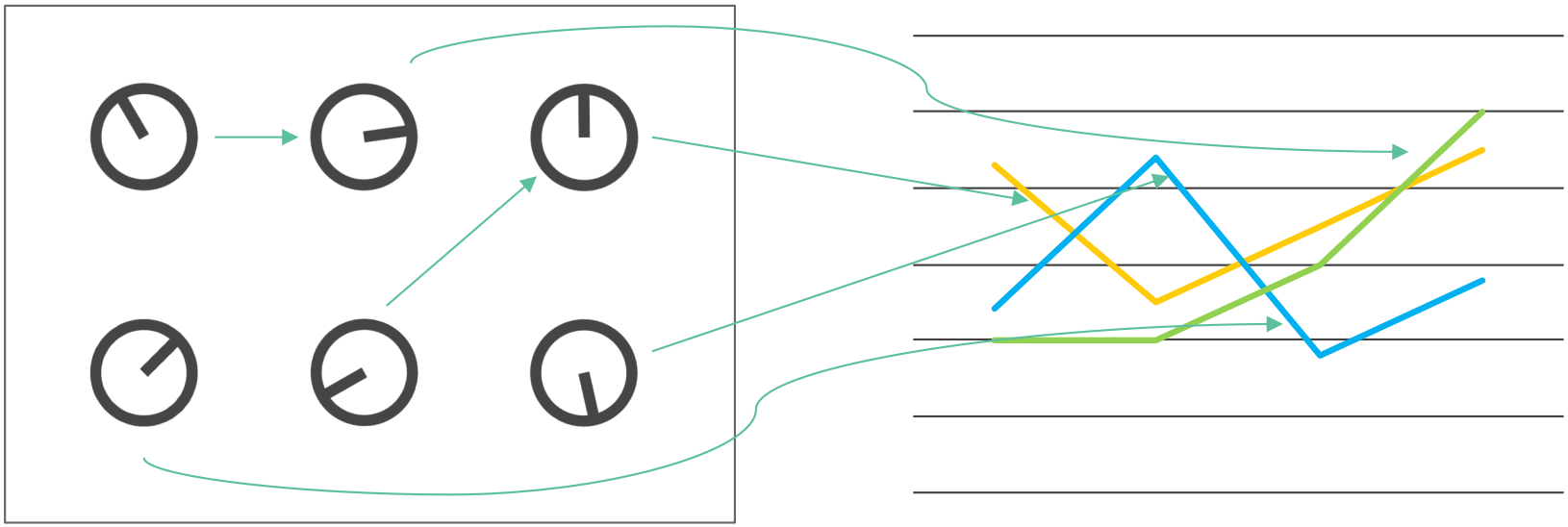
BUSINESS LEVEL	GAMES	CUSTOMER SERVICE	C2C COMMERCE
MUV Monthly Unique Viewers	Average Daily Play Time	User Inquiries	Potential sales initiated
MAU Monthly Average Users	Games per Session	Quits without final results	Click through rate
DAU Daily Average Users	Player Attach Rate	Time on hold	Closed sales
PCU Peak Concurrent Users	Revenue per Player	Staff interaction time	Average transaction size
ACU Average Concurrent Users	Revenue per day	Staff interaction percent	Average monthly transactions
Weekly Return Rate		Ticket escalation percent	Abandoned shopping carts
Monthly Return Rate			

Connecting Telemetry to Business Level Metrics

Think of Applications as having many knobs which are connected to both each other and to KPIs.

Some of the knobs are known, some you need to discover.

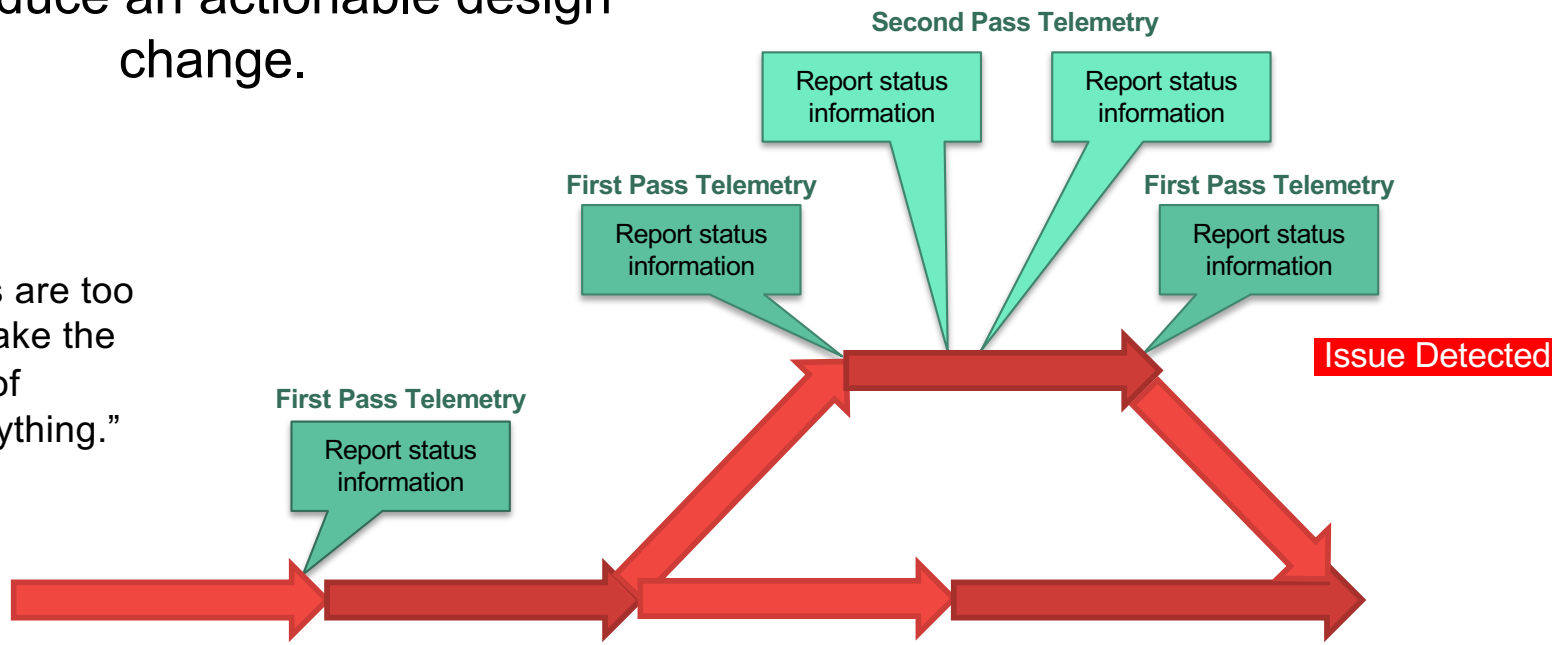
Once you how they are connected to KPIs, you can turn them in the right direction to drive those Business Level Metrics to success.



Using Iterative Refinement to Produce Actionable Results

Multiple passes are required to pin-point the exact nature of a problem and produce an actionable design change.

Most Applications are too complicated to take the approach of "instrument everything."

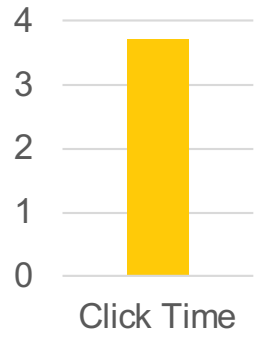


Case Study: “Next” Button Placement In Asteri Analytics

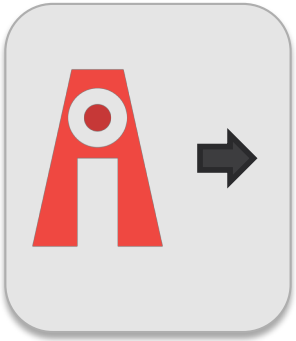
At Asteri we believe in taking our own medicine, so we used our Analytics to test two different configurations of the “Next” button on our image testing website.

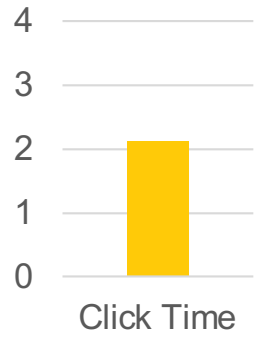
We measure a user’s engagement in an image by measuring the amount of time they spend looking at it.

However we discovered there is a *2nd influence on time.*



It doesn’t matter what image you show, or how engaged the user is, by moving the “Next” button from the bottom to the right side consistently reduces the average click time by about 1.6 seconds.





This is how the Asteri Data Analytics Platform is used to *optimize* User Experience.

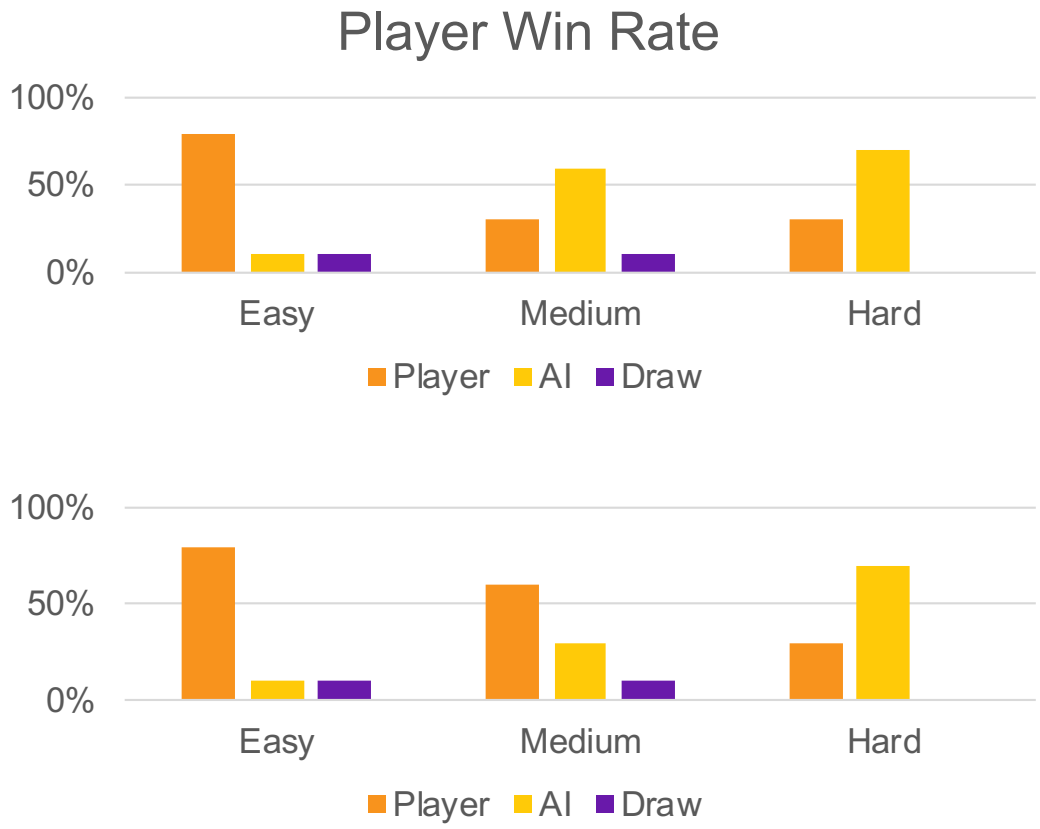
Case Study: Tuning AI in the Otrio* Game

While set on ***Easy*** the AI loses most of the time – which is good.

However on ***Medium*** the game is definitely too difficult.

We feel on *Medium* the Player should win a bit more than half the time.

By collecting data in real time, we can use the Asteri Data Analytics Platform to quickly tune the AI while watching the changes in the Player Win Rate until we achieve our target result.



* Otrio is a mobile game being developed by Asteri in partnership with Spin Master, Ltd.

Use Cases for Predictive Audience Analytics™

Asteri's HQ in historic downtown Shreveport, our close relationship with the locally based BRF InterTech Innovation Accelerator, as well as our proximity to Barksdale AFB make these logical projects for us.

Build a **Permanent Change of Station (PCS) app** that automates the process by providing checklists & tracking fully instrumented to optimize the App and the PCS process.

Partner with **training & simulation companies** to instrument and optimize the learning process and cockpit configurations.

Track **candidates' interest & abilities**, use the data in an attribution system to optimize a multi-platform media recruitment campaign.

Predictive Audience Analytics™ is a SaaS Platform

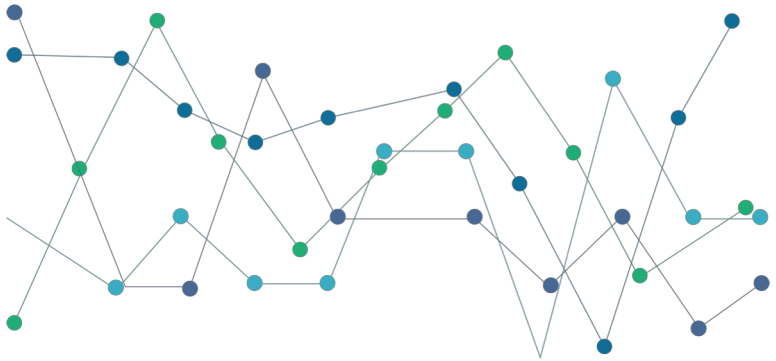
Software-as-a-Service Platform

- It is designed to be integrated into any application.
- Asteri's Analytics division can provide subcontracting services to help with integration and create all necessary analysis and reporting systems.

How can we use Data Analytics to effect **Positive Change** in Social Norms and Structures?

Tracking Positive Social Behavior (PSB)

Data Mining combined with Natural Language Processing
allows us to build an accurate profile of a User's interests and behavior.



PSB Index

Positive Social Behavior Index

How Asteri uses Intra- and Inter-Media Optimization

- **CREATE**
- **DEPLOY**
- **ANALYIZE**
- **OPTIMIZE**
- **ITERATE**

Intra-Media Optimization

Use Asteri's Predictive Audience Analytics platform to optimize engagement and build PSB effect within each piece of content.

Inter-Media Optimization

Track PSB effects across all content, to find the most effective interactive and linear entertainment for mobile, console and PC.

Local Content is Critical

Asteri's Analytics helps target and refine linear and interactive content, but it is not a replacement for creativity.

To reach at-risk individuals and build PSB we must work closely with artists of all types from local cultures.

Our Founders' history in the entertainment industry has forged relationships with creative artists around the world.

There is a real opportunity to use ***Asteri's iterative optimization*** to create online content that can promote ***Positive Social Behavior***

Contact Steve Gray
steve@asteri.io