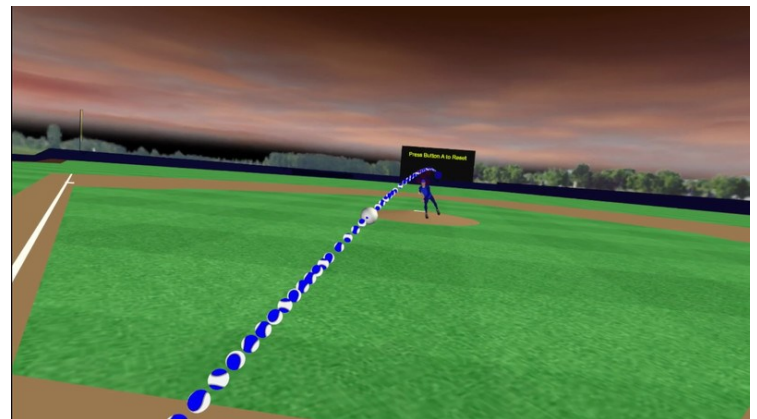
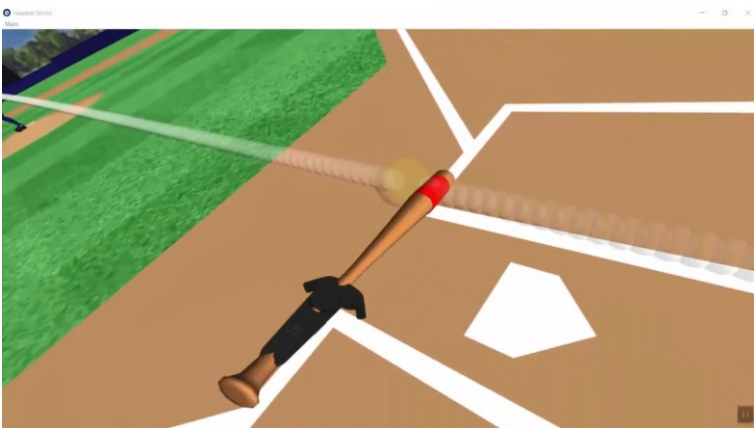
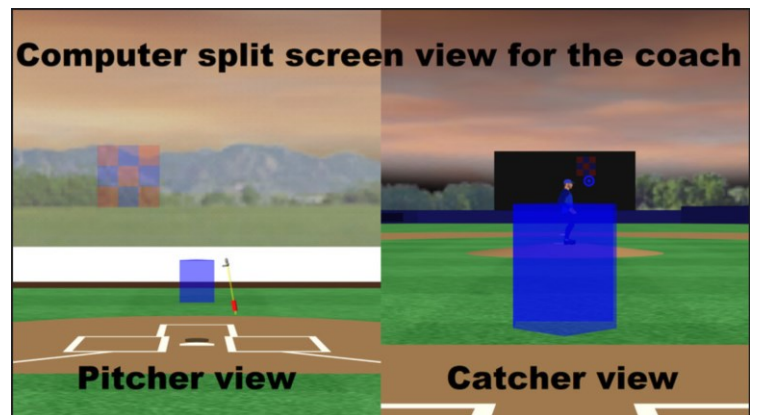
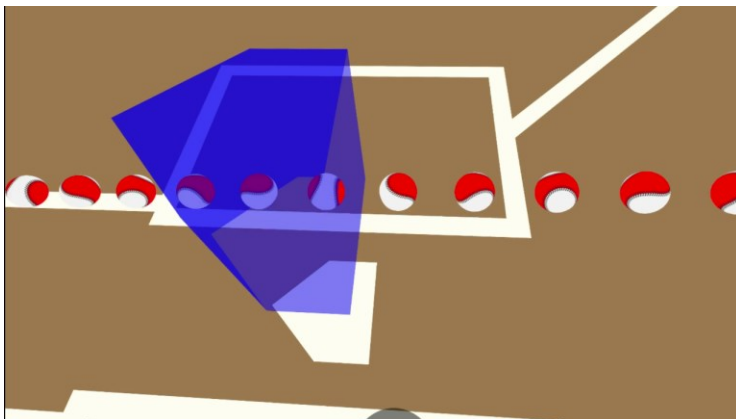




PITCHvr™

Baseball is a game
Virtual Reality is used for games
PITCHvr™ Vision is no game

Science-based hitter training for the *serious* athlete



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Vision Training Essentials

Pitch Recognition

Fastball, Curve, Slider, Change Up

TRAINING ESSENTIALS

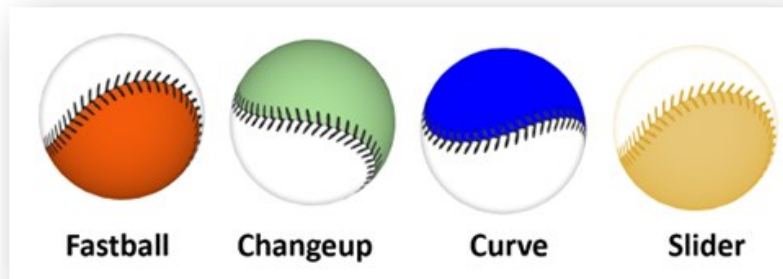
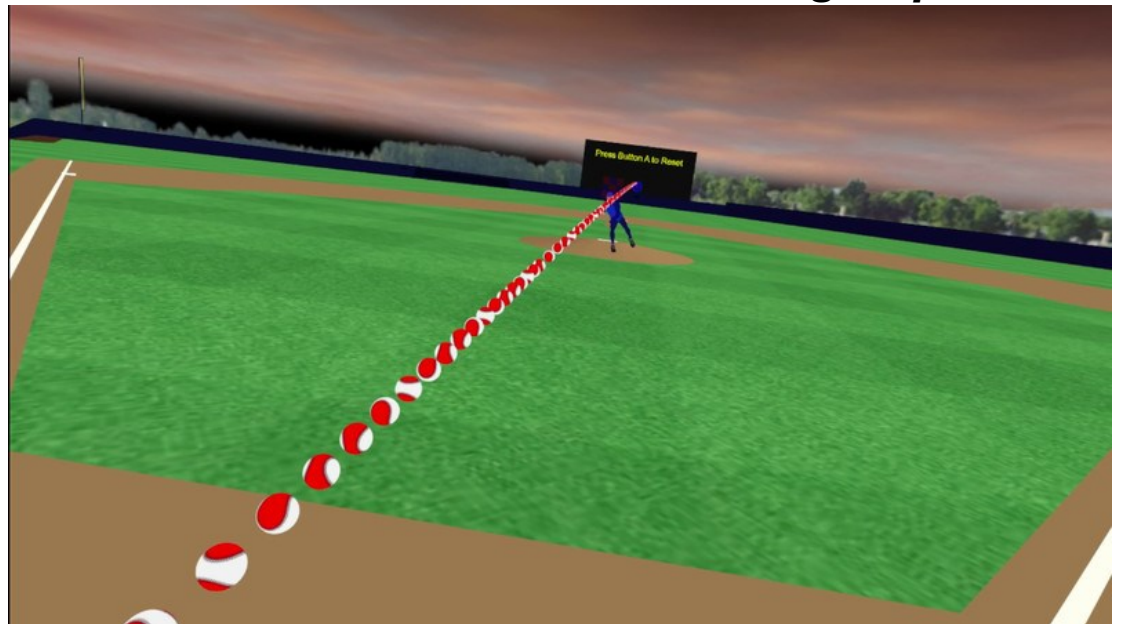
With PITCHvr™ you are not just watching pitches. You are trained to identify them.

COLOR CODED BALLS

When selected, the color-coded balls indicate the type of pitch being thrown. Red is used for fastballs; Blue for curves; Yellow for sliders, and Green for changeup. The colors also aid the batter by highlighting the spin of the pitch.

SPIN ARROWS

When selected balls with arrows printed on them emphasize the spin the pitcher puts on the ball. The thick black arrows on the ball can be seen live as the pitch is headed toward the plate and are also shown after the live pitch in the pitch trajectory graphic.



Optional colored balls train the player to make quick decisions.

Spin Arrows train observation of the axis of rotation and rate





Vision Training Essentials

Strike Zone Recognition

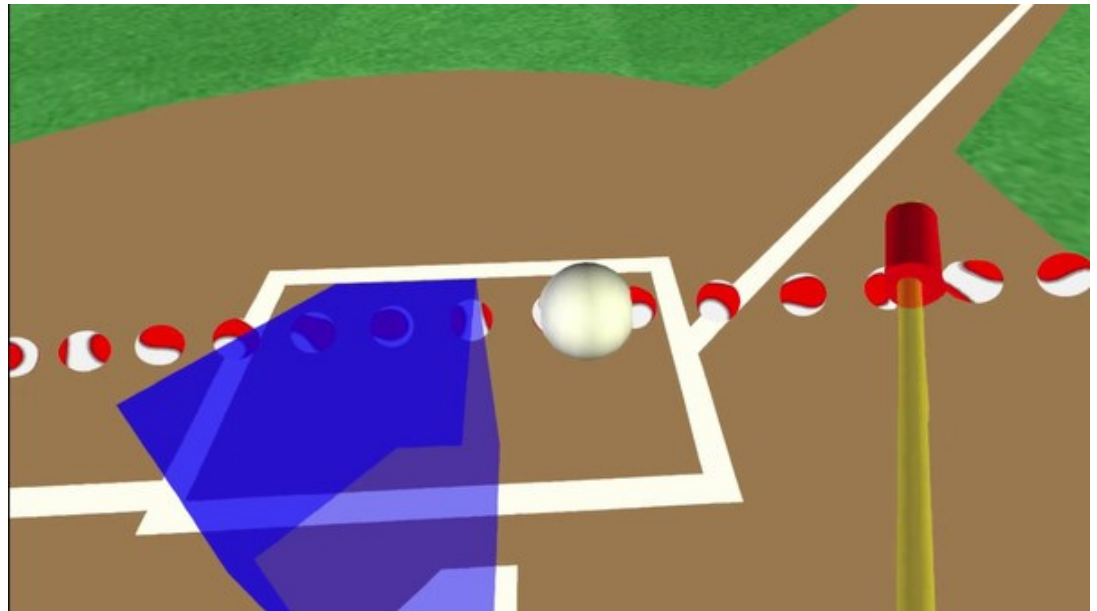
K Zone

STROBOSCOPE TRAINING

PITCHvr™ training goes beyond what you can do on the field. With this selection, the pitched ball appears and disappears on its way to the plate. Your brain strains, but improves your pitch recognition.

SOUNDSCAPES

With PITCHvr™ you're not just watching pitches, you are training your brain. Audio cues signal the pitch speed, spin and location. The more you watch and listen, the more your real-life reactions improve.



With **PITCHvr™ Vision** training you are not just watching pitches, you are trained to quickly identify your personal strike zone. Before the pitch hits the catcher's glove, you signal *ball* or *strike*.

A staircase adaptive training approach is implemented where the viewing time of the pitch after release is varied.

The strike zone volume is set specifically for your personal stance.





*Train against the best pitching
Pitch databases are available for
High School, College and Pro.*

PITCH DATABASES

Extensive data base of pitches for training at all levels are available.

PITCHvr™ Vision databases include Fastballs, Curveballs, Sliders, and Change ups.

Pitch Type 3/4 release	HS (MPH)	College (MPH)	Pro (MPH)
Change up	70-74	79-83	86-90
Slurve	70-74	74-78	82-86
Hybrid beteen Slurve and 12-6	68-72	71-75	81-85
12 to 6 curve	66-70	69-73	79-83
Cutter	76-85	86-95	92-101
Four seam fastball	76-85	86-95	96-105
Split finger fastball	76-85	86-95	96-105
Two seam fastball	76-85	86-95	96-105
Slider with more run and less depth	74-78	77-81	88-92
Slider with less run and more depth	76-80	81-85	90-94

The training philosophy has been called "**practice dirty, play clean.**" This means that during training in the virtual world, the player will be challenged by some pitches that are beyond the physical capabilities of the top pitchers. Even the best hitters will be challenged, so leave your ego on the bench.





Vision Training Advanced

Soundscapes™

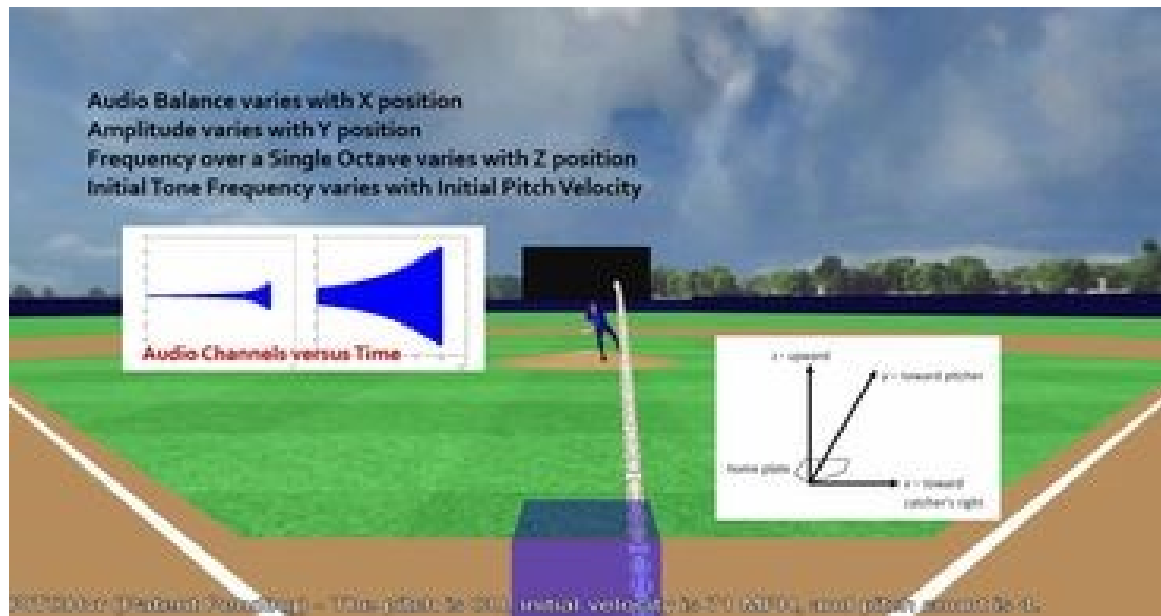
Training your brain's visual recognition using audio

SOUNDSCAPES

With PITCHvr™ you're not just watching pitches, you are training your brain. Audio cues signal pitch speed, spin and location. The more you watch and listen, the more your real-life reactions improve.

TRAINING

PITCHvr™ trains your brain with 3D sound and improves your instincts in a way that can't happen training on the playing field.



With most aspects of PITCHvr™ the player must deeply concentrate; however, the patented Soundscapes™ technology is an exception. With each thrown pitch, the Soundscapes™ feature produces a complex sound that represents the instantaneous speed, pitch type and location of the ball throughout its trajectory toward the plate.

The theory behind Soundscapes™ is that over time, after experiencing multiple pitches, the audio input will have helped reinforce the player's pitch recognition and the ability to track the pitch. This improvement is expected to persist, even when the Soundscapes™ are not present.

Your brain is learning to make you a better hitter.





Vision Training Advanced

Pitch Release Point

Training your brain to pick up the ball

ADVANCED VISION

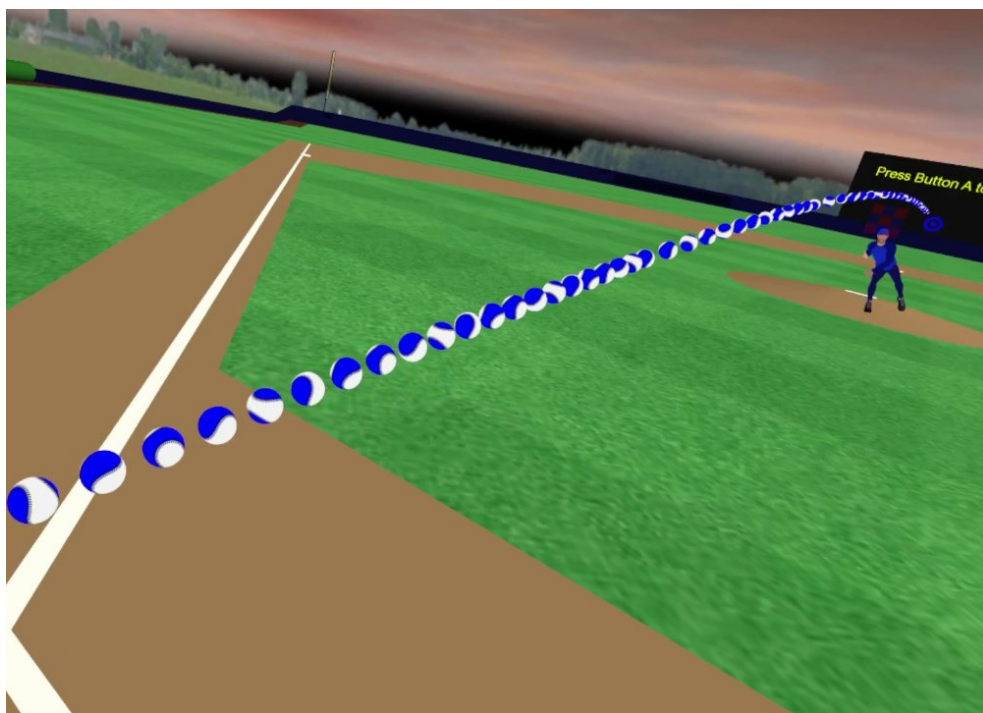
Some pitchers try to fool you by keeping their release points tight. Others move it around to keep you off-balance.

Your job is to find the differences in each release – often a fraction of an inch.

TRAINING

PITCHvr™ helps players focus on the release point, by providing a subtle virtual target above the pitching shoulder.

Focus on each pitch release for a particular pitcher and you will improve your hitting.



Players need to focus on the pitch release point.

PITCHvr™ provides virtual targets above the pitcher's shoulder to improve your focus on release point, arm extension, arm angle, finger position and spin.





Vision Training Advanced

Tunnel Zone

TUNNEL ZONE

For Tunnel Zone training a semi-transparent checkerboard panel is placed midway between the pitcher and the plate.

In this way, batters can train by observing the pitch trajectory relative to the Tunnel Zone graphic.

ADVANCED VISION

This feature helps batters sharpen their instincts to differentiate between different types of pitches



Entering the Tunnel Zone.

As a serious ball player, you've likely heard all about perceived velocity and the tunneling of pitches.

With a tunnel zone, great pitchers keep great hitters guessing until the last possible millisecond by keeping all of their pitch types in the same tunnel, or vision location, as long as possible.

Pitchers also hide the velocity of the pitch in that tunnel by adjusting their arm angle to create an optical illusion of false velocity.





PITCHvr™ Vision Features

- Immersive training in a ballpark with realistic dimensions
- Staircase adaptive training -- the user selects the initial degree of difficulty, but the system adjusts to the player's actual performance level during the session
- Personalized strike zones, set by the user, accounting for height variability from player to player
- Bat length as selected by the player
- Player can bat left or right
- Three levels of pitching data sets are available: high school, college, and pro
- A realistic pitcher avatar who throws four types of pitches: Fastball, Curveball, Slider and Change up
- Selection of left or right-handed pitcher
- Multiple pitch combinations set by the user consider spin mirroring
- Animations show the pitcher's finger positions as the pitch is being released
- Training mode that employs 3D graphics to indicate pitch release point and tunnel zone





PITCHvr™ Vision **Features continued**

- User selections for type of baseball including: size (standard 3 inch or more difficult 2 inch diameter), color (denoting type of pitch), seam thickness and graphics on the baseball to highlight spin rate and direction
- Patented Soundscapes™ train the player's brain to assess speed, type, and position of the ball in-flight
- Patented Eye-sync™ trains the user to better track the trajectory of the pitch and spin of the ball by allowing the user to repeatedly replay the pitch forward and backward
- Several techniques are employed in evaluation mode, including strobed pitches where the ball vanishes on the way to the plate
- Live Coach / Trainer's view on the computer monitor shows a catcher's view and the pitcher's view of each pitch and swing
- After each pitch, the result is shown on the scoreboard
- At the end of a session, an XLS (e.g. Excel) report file provides pitch by pitch reports on the batter's reactions for player and trainer review





Advanced virtual reality hitter training for every skill level

PITCHvr™ Base program includes all of the features listed in this document. Included is the **High School** pitch database.

Purchase online:

\$39.99

PITCHvr™ Base program includes all of the features listed in this document; the **High School** pitch database and the **College** pitch database.

Purchase online.

\$59.99

PITCHvr™ Base program includes all of the features listed in this document; the **High School, College and Pro** pitch databases.

Purchase online.

\$79.99

Requires a VR capable Windows computer and a compatible virtual reality headset. Contact PITCHvr@NovationTechLLC.com for details.





Training Philosophy

- PITCHvr™ is not a game or even a simulation of real-life training – it is much more.
- PITCHvr™ complements on-field training to develop extraordinary skills.
- PITCHvr™ presents training conditions that can only be created in the virtual world.
- PITCHvr™ improves human performance traits that occur over a fraction of a second.
- Tracking of the ball by the “smooth pursuit” of the eyes is critical.
- Visual, audio, and tactile stimuli all develop the player’s ability to correctly anticipate the path of the ball.
- PITCHvr™ gauges the user’s hitting performance over time.
- PITCHvr™ uses a staircase adaptive training to make the training optimal to advance the player’s skill level.
- Uses the philosophy called "**practice dirty, play clean.**" Even the best hitters will be challenged.

