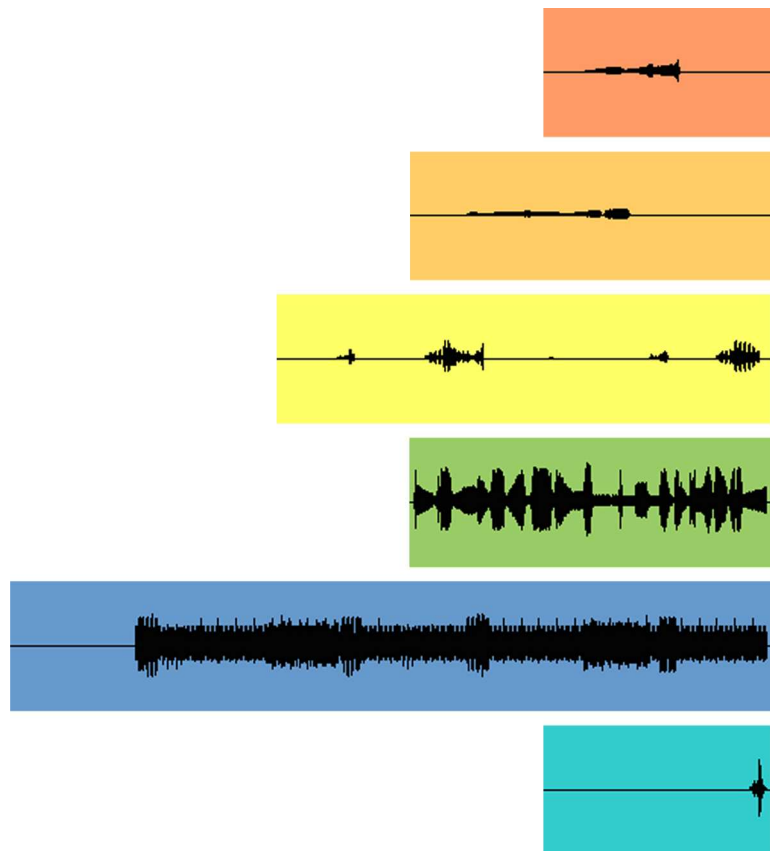


Seeker race simulation



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Seeker

Seeker is the first comprehensive project demonstrating the VOS system. It converts a Californian raceway to music and simulates 4 laps of racing against 6 other competitors.

The project was designed to test the system and expose aspects that could be improved. Several modifications feature in the piece, with others to appear in future projects.

Modifications

The left and right track edges are represented rather than the track itself. Their melodies are similar but the instruments playing them are very different.

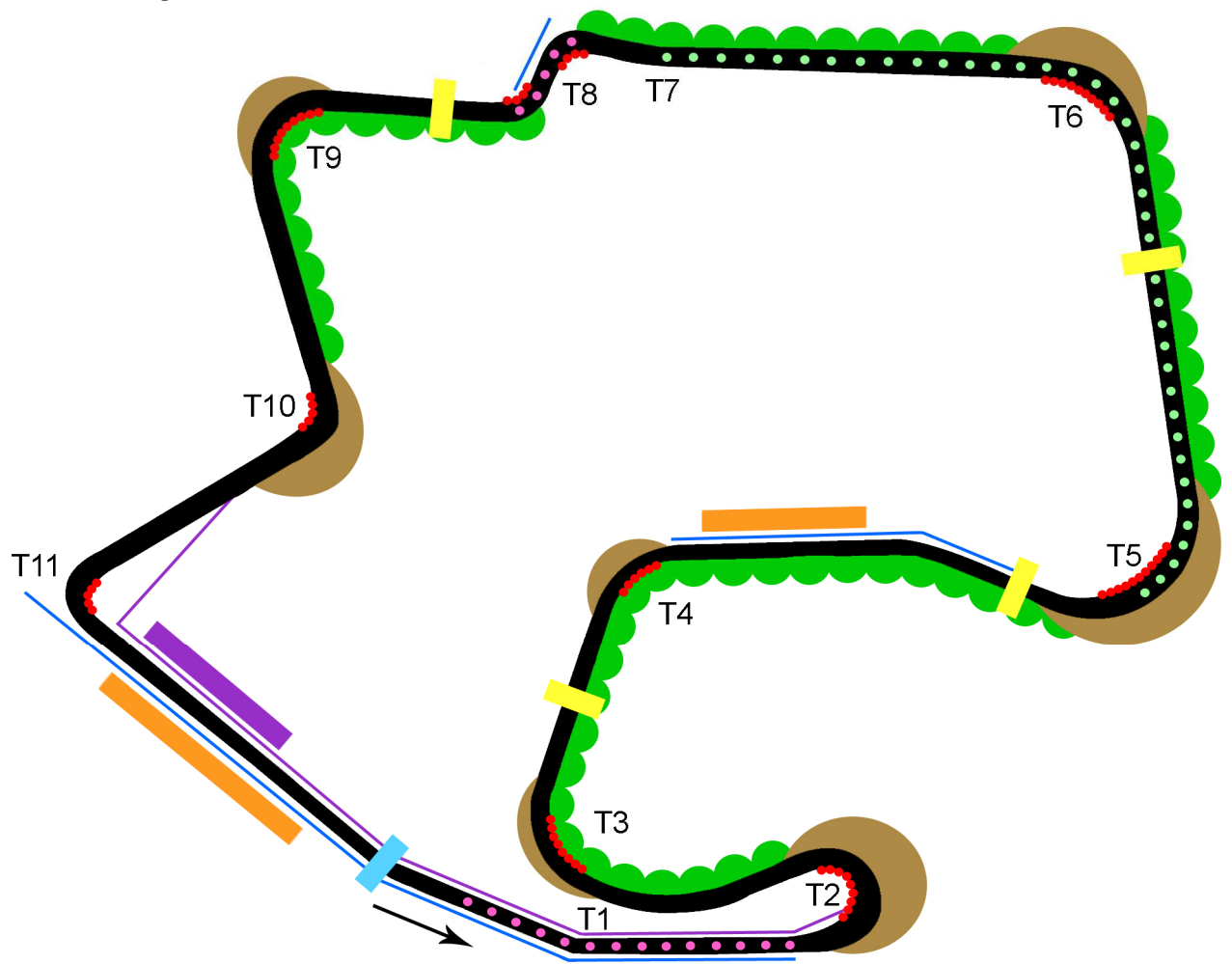
Chiffer bells reflect the jarring sensation of the rumble strips rather than their colour, and the pit lane and garages are represented together as a single facility.

Percussion was applied generally. Muted percussion represents the smooth track surface, bells and cymbals for slippery runoff areas, the snare for fixed hazards and high and low congas for inclines and declines.

The piece also introduces a velocity mapping tool that incorporates a bass drum.

The guide tool was removed for causing interference with other items, the targeting tool could not feature and duplication for width was omitted due to processing limitations.

Raceway



 Barrier	 Decline	 Grandstand
 Grass Verge	 Incline	 Overbridge
 Pit Lane and Garage	 Rumble Strip	 Sand Runoff
 Start/Finish Line	 Track	

Lap 1

The first lap introduces the Laguna Seca raceway.

The left and right edges open the piece on the finishing straight where barriers, pit lane facility, grandstands, and overbridges are introduced.

The lap begins when the start/finish line sounds and the track edges extend in front of you as you head downhill and left past turn 1.

Turn 2 is a slow left hairpin introducing rumble strips, sand runoff and grass verges on the exit.

Right turns 3 and 4 lead to an incline through left turns 5 and 6 until the easy right at turn 7.

You then plummet down the turn 8 corkscrew, snapping left then right into turn 9.

The corners become progressively tighter as you switch left, right and left again from turns 9 through 11 and arrive on the finishing straight.

Lap 2

Velocity mapping features throughout lap 2, and car 1 is introduced between turns 10 and 11.

Lap 3

Velocity mapping is swapped for terrain mapping on lap 3.

Muted percussion features when travelling the smooth track surface, whereas bells and cymbals sound when you slide onto the sand at turns 2 and 10.

Low congas sound when travelling the decline past turn 1 to turn 2, and at turn 8.

High congas indicate you are travelling the incline from turn 5 to turn 7.

Snares indicate proximity to the barriers at the finishing straight, the straight between turns 4 and 5, and at turn 8.

Cars 6 and 4 join the track from the pit lane after turn 2, car 3 is introduced between turns 5 and 6, and car 2 features from the finishing straight.

Lap 4

Lap 4 combines velocity and terrain mapping as well as introducing car 5 between turns 4 and 5.

The piece ends when you take the chequered flag after car 2 comes to grief on the last corner.

Components

Information on each component appears in the order featured.

Left Track Edge	10
Right Track Edge	11
Barriers	12
Pit Lane and Garages	13
Grandstands	14
Overbridges	15
Start/Finish Line	16
Rumble Strips	17
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Car 1	21
Terrain Map	22
Car 6	23
Car 4	24
Car 3	25
Car 2	26
Car 5	27

Left Track Edge

Celeste



Featuring continuously throughout.



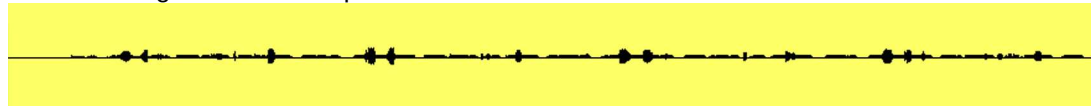
Left track edge left octave 3 profile



Left track edge right octave 3 profile



Left track edge left octave 4 profile



Left track edge right octave 4 profile



Left track edge left octave 5 profile



Left track edge right octave 5 profile

Right Track Edge

Harp



Featuring continuously throughout.



Right track edge left octave 3 profile



Right track edge right octave 3 profile



Right track edge left octave 4 profile



Right track edge right octave 4 profile



Right track edge left octave 5 profile



Right track edge right octave 5 profile

Barriers

Percussion organ



Featuring on the right of the finishing straight from turn 11 to turn 2, on the left from turn 4 to turn 5 and on the right at turn 8.



Barrier left octave 2 profile



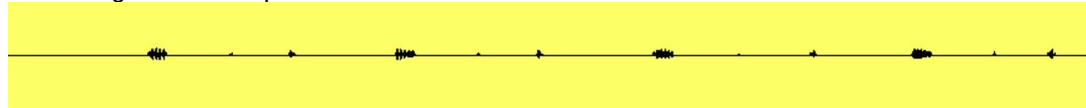
Barrier right octave 2 profile



Barrier left octave 3 profile



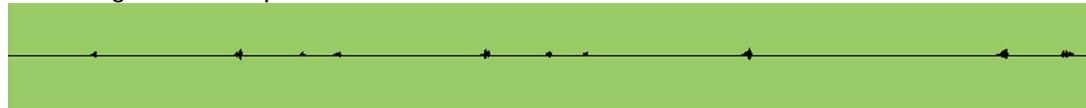
Barrier right octave 3 profile



Barrier left octave 4 profile



Barrier right octave 4 profile



Barrier right octave 5 profile

Pit Lane and Garages

Electric guitar



Featuring on the left from the straight between turns 10 and 11, along the finishing straight and exiting at turn 2.



Garage left octave 1 profile



Garage left octave 2 profile



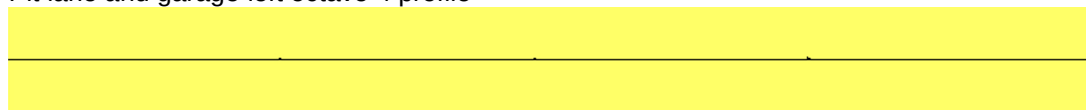
Pit lane and garage left octave 3 profile



Pit lane and garage right octave 3 profile



Pit lane and garage left octave 4 profile



Pit lane and garage right octave 4 profile



Pit lane and garage left octave 5 profile

Grandstands

Digital tines



Featuring on the left between turns 4 and 5, and on the right between turn 11 and the start/finish line.



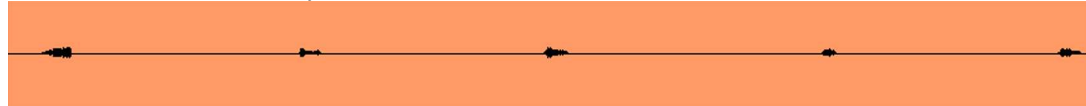
Grandstand left octave 1 profile



Grandstand right octave 1 profile



Grandstand left octave 2 profile



Grandstand right octave 2 profile



Grandstand left octave 3 profile



Grandstand right octave 3 profile

Overbridges

Electric piano



Featuring over the start/finish line, between turns 3 and 4, just before turn 5, between turns 5 and 6, and just after turn 8.



Overbridge left octave 1 profile



Overbridge right octave 1 profile



Overbridge left octave 2 profile



Overbridge right octave 2 profile



Overbridge left octave 3 profile



Overbridge right octave 3 profile

Start/Finish Line

Digital bells



Start



Lap 2



Lap 3



Lap 4



Finish

Featuring just after the grandstand on the finishing straight at 0.21, 1.53, 3.24, 5.03 and 6.33 minutes.



Start/finish profile

Rumble Strips

Chiffer bells



Featuring on the inside edges of turns 2, 3, 4, 5, 6, 8, 9, 10 and 11.

Rumble strip left octave 3 profile



Rumble strip right octave 3 profile



Rumble strip left octave 4 profile



Rumble strip right octave 4 profile



Rumble strip left octave 5 profile



Rumble strip right octave 5 profile

Sand Runoff

Saxophone



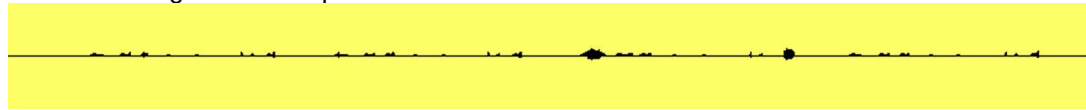
Featuring from the outside edges of turns 2, 3, 4, 5, 6, 9 and 10.



Sand runoff left octave 3 profile



Sand runoff right octave 3 profile



Sand runoff left octave 4 profile



Sand runoff right octave 4 profile



Sand runoff left octave 5 profile



Sand runoff right octave 5 profile

Grass Verges

Flute



Featuring on the right from the turn 2 exit to the turn 5 entry, the straight between turns 5 and 6, from the turn 6 exit to the turn 8 entry, and on the left from the turn 8 exit to the turn 10 entry.



Grass verge left octave 3 profile



Grass verge right octave 3 profile



Grass verge left octave 4 profile



Grass verge right octave 4 profile



Grass verge left octave 5 profile



Grass verge right octave 5 profile

Velocity Map

A bass drum indicates speed on laps 2 and 4.

Per beat:	0-50MPH.
Per half beat:	51-100MPH.
Per quarter beat:	101-150MPH.



Velocity map profile

Car 1

Crystal



Featuring from between turns 10 and 11 at 3.10 minutes until turn 10 at 4.48 minutes.



Car 1 left octave 2 profile



Car 1 right octave 2 profile



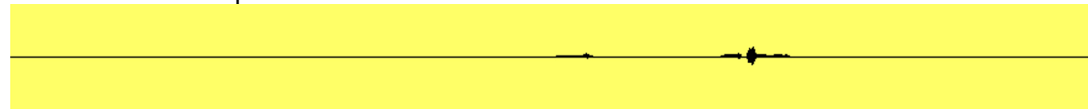
Car 1 left octave 3 profile



Car 1 right octave 3 profile



Car 1 left octave 4 profile



Car 1 right octave 4 profile



Car 1 left octave 5 profile



Car 1 right octave 5 profile

Terrain Map

Percussion indicates contacted and proximate terrain on laps 3 and 4.

Muted percussion:	When travelling the smooth track surface.
Bells and cymbals:	When travelling slippery runoff areas at 3.35 and 4.47 minutes.
High conga:	When travelling the incline from turns 5 to 7.
Low conga:	When travelling declines on the finishing straight and turn 8.
Snare:	When proximate to barriers.



Terrain map contact profile



Terrain map left proximity profile



Terrain map right proximity profile

Car 6

Dulcimer guitar



Featuring from the pit lane at 3.30 minutes until the straight between turns 5 and 6 at 4.13 minutes.



Car 6 left octave 1 profile



Car 6 right octave 1 profile



Car 6 left octave 2 profile



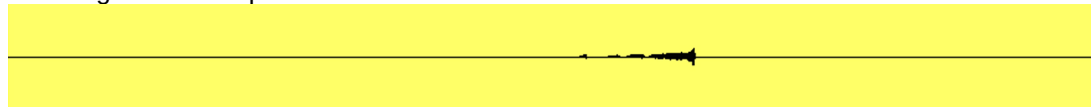
Car 6 right octave 2 profile



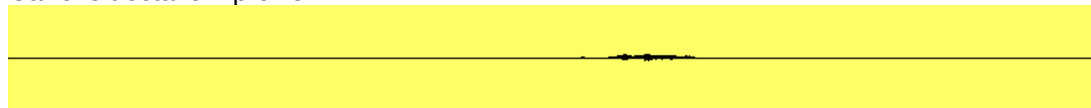
Car 6 left octave 3 profile



Car 6 right octave 3 profile



Car 6 left octave 4 profile



Car 6 right octave 4 profile



Car 6 left octave 5 profile



Car 6 right octave 5 profile

Car 4

Koto



Featuring from the pit lane at 3.31 minutes until turn 7 at 4.26 minutes.



Car 4 left octave 1 profile



Car 4 right octave 1 profile



Car 4 left octave 2 profile



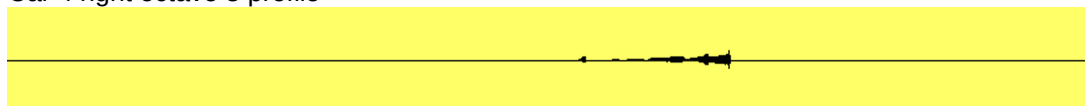
Car 4 right octave 2 profile



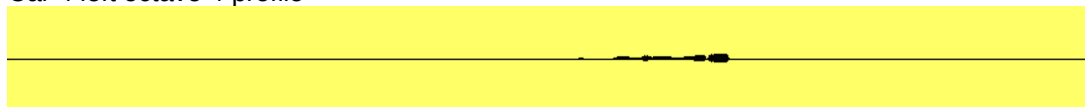
Car 4 left octave 3 profile



Car 4 right octave 3 profile



Car 4 left octave 4 profile



Car 4 right octave 4 profile



Car 4 left octave 5 profile



Car 4 right octave 5 profile

Car 3

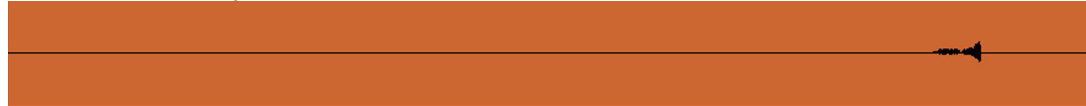
Grand piano



Featuring from between turns 5 and 6 at 4.15 minutes until the straight between turns 6 and 7 at 5.59 minutes.



Car 3 left octave 1 profile



Car 3 right octave 1 profile



Car 3 left octave 2 profile



Car 3 right octave 2 profile



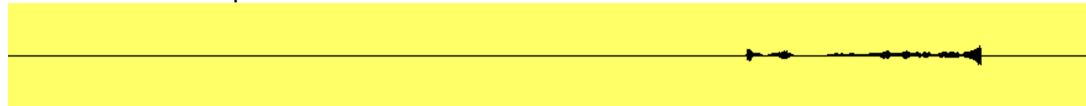
Car 3 left octave 3 profile



Car 3 right octave 3 profile



Car 3 left octave 4 profile



Car 3 right octave 4 profile



Car 3 left octave 5 profile



Car 3 right octave 5 profile

Car 2

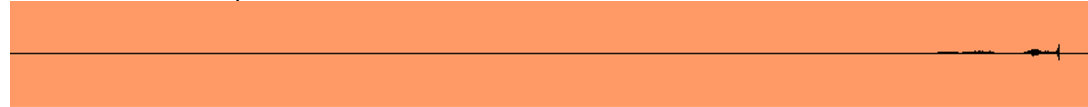
Clarinet



Featuring from the finishing straight at 5.02 minutes until turn 11 at 6.28 minutes.



Car 2 left octave 2 profile



Car 2 right octave 2 profile



Car 2 left octave 3 profile



Car 2 right octave 3 profile



Car 2 left octave 4 profile



Car 2 right octave 4 profile



Car 2 left octave 5 profile



Car 2 right octave 5 profile

Car 5

Violin



Featuring from between turns 4 and 5 at 5.36 minutes until the straight between turns 9 and 10 at 6.18 minutes.



Car 5 left octave 1 profile



Car 5 left octave 2 profile



Car 5 right octave 2 profile



Car 5 left octave 3 profile



Car 5 right octave 3 profile



Car 5 left octave 4 profile



Car 5 right octave 4 profile



Car 5 left octave 5 profile



Car 5 right octave 5 profile

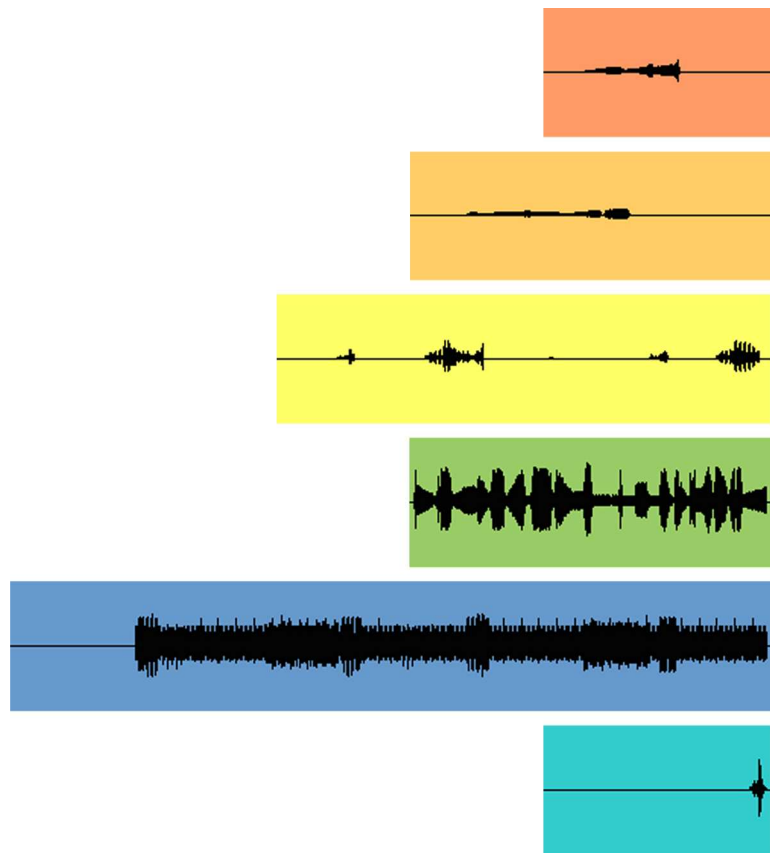
Future

As a demonstration, Seeker indicates VOS principles may find some practical application in a sightless navigation instrument.

The possibility encourages further development that includes advances driven by the project and potential improvements identified.

Future projects will feature advances such as greater musical freedom, a redeveloped guide tool and refined percussion.

Additional tools, staged sound qualities for accuracy and a visual learning component may also feature.



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