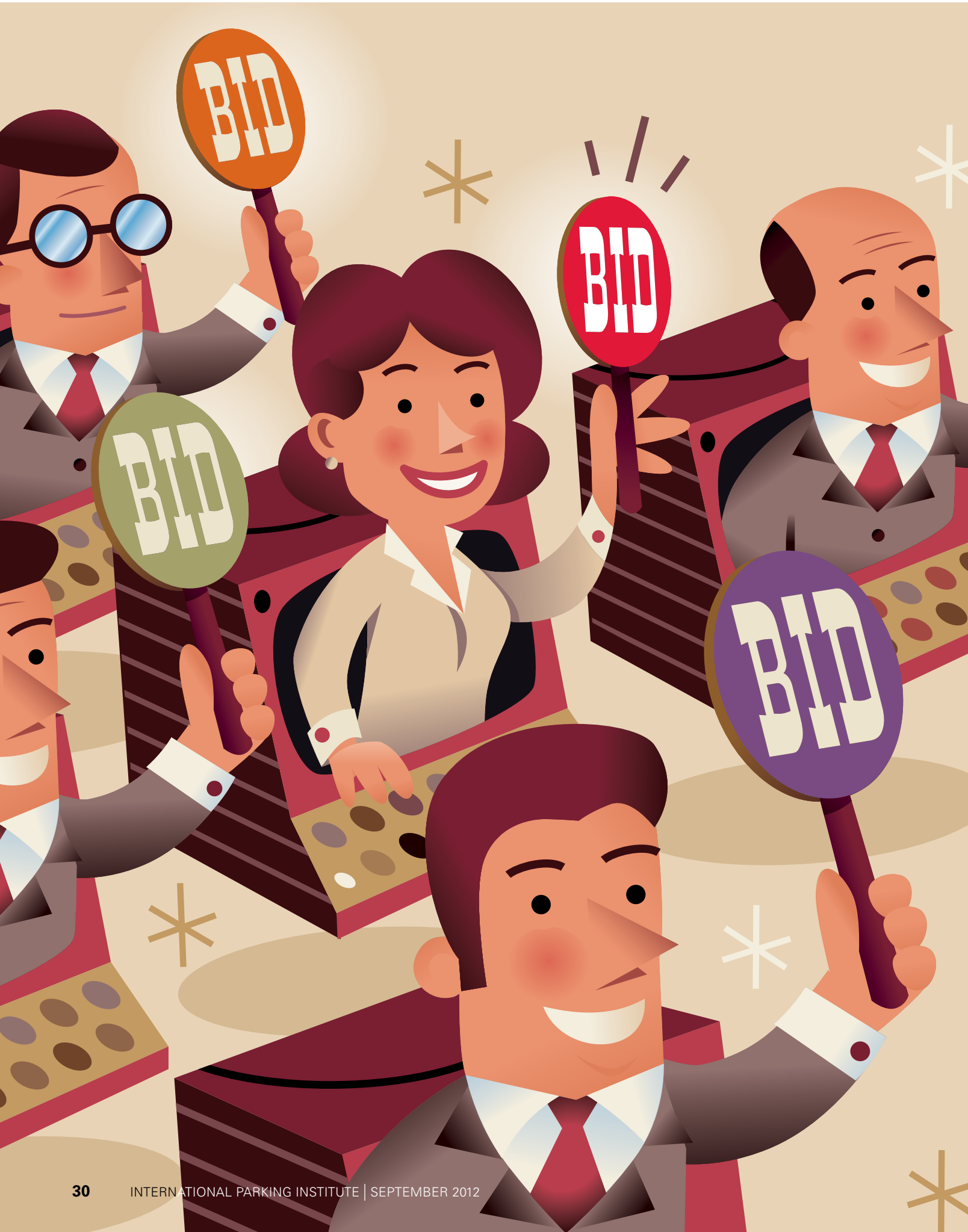
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CASE STUDY

By Sheryl Boyd

GOING ONCE, GOING TWICE, SOLD!

Chapman University and the parking auction experiment.

Chapman University has used parking auctions to allocate a portion of its parking resources for the past four years. We initially implemented three separate auctions with plans to expand the system to include most core campus parking facilities. But before addressing our parking auctions, a little background information about Chapman University may be appropriate.

Chapman University is located in downtown Orange, Calif., adjacent to the historic downtown corridor. The university has approximately 3,400 parking spaces, 6,500 students, and a faculty/staff population of approximately 1,500. As on many college campuses, parking is a challenge. Keeping all our constituents parked on campus and not in front of neighbors' homes or local businesses is difficult. So whatever parking plan the university adopts must discourage parking in the surrounding neighborhood.

Every fall semester, the university administers our Student Services Satisfaction Survey. The students rank campus services both on level of importance and how well they are satisfied with each. Parking typically ranks very high in importance but at the lower end of the scale in terms of satisfaction.

In 2005, Chapman built a two-level underground parking structure beneath the athletic field, which is centrally located among the main campus buildings. After this facility came online in 2006, student satisfaction with parking rated the highest it ever had since the inception of the survey. On a scale of one to five, parking was rated at more than four in terms of both importance and satisfaction; satisfaction before then was typically in the two to three range.

Students were able to arrive 10 minutes before class, find a parking space, and make it to class on time. That became the expectation. Even as our student, faculty, and staff populations (who all share the garage) grew, students still expected to find parking quickly.

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Two years into the use of the facility, parking started to become challenging. Students sometimes circled 30 minutes waiting for desired spaces instead of parking one block away in the 725-space structure located behind the law school.

Chapman University President Jim Doti became determined to find a way to improve student satisfaction with parking using only the existing facilities. An economist by education and trade, he turned to the faculty of the Economic Science Institute (ESI) to come up with a way to provide improved parking access for those students who place a high value on close, convenient parking.

According to Professor David Porter, "We [ESI faculty] were approached by President Doti after there were complaints from both students and faculty about not being able to find parking in a reasonable amount of searching time at a close location. Basically, there was a demand for convenient parking, but all spots in a lot were treated equally. President Doti knew of our extensive work on auctions and dynamic allocation systems and asked if we could create something for Chapman parking to help allocate convenient parking on campus."

Raising the Gavel

As the idea of a parking auction began to take shape, the university hired a parking consultant and formed a committee of campus stakeholders to evaluate its parking plan and find a way to integrate an auction system without affecting the surrounding neighborhood. In essence, the plan had to be appealing enough to attract participation.

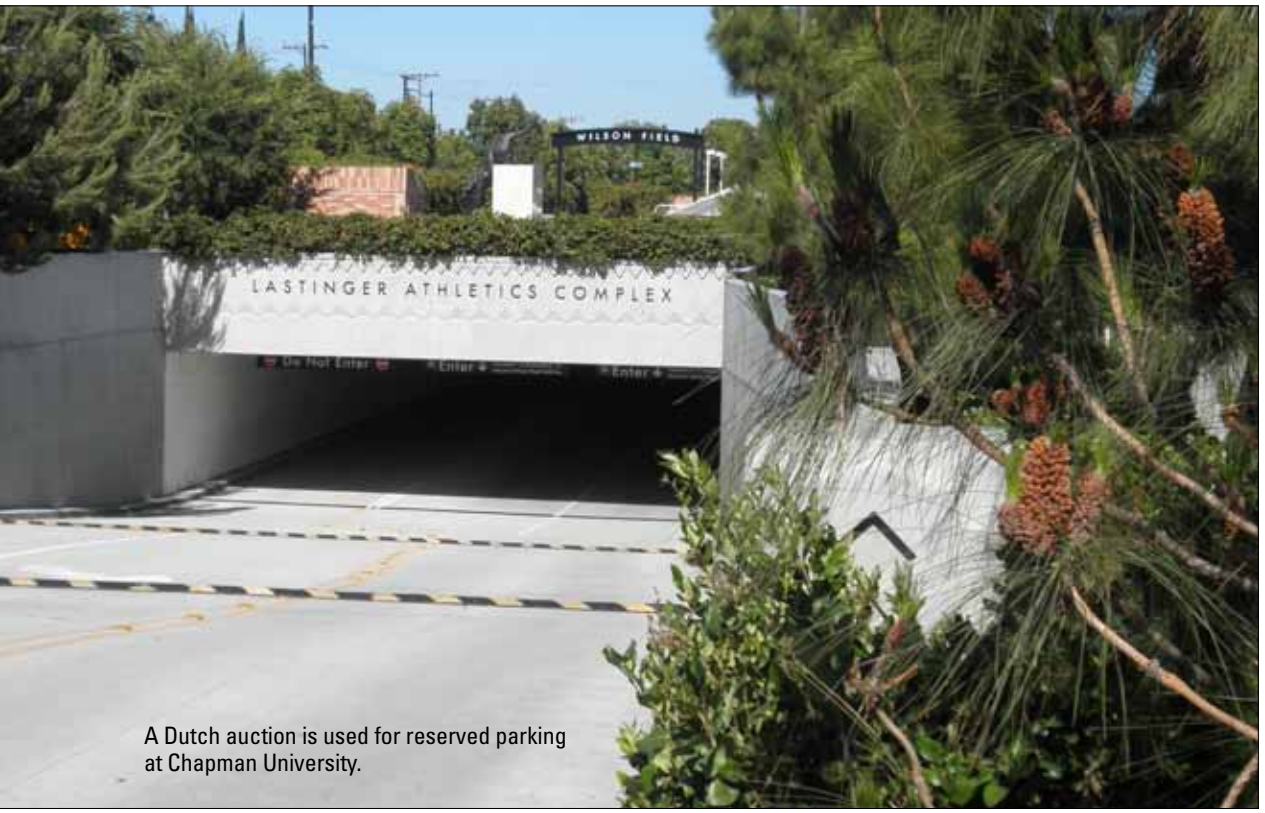
We started working on what would become the C-Park auction system. A website and marketing materials were created to let students know the administration understood their frustration with parking and was formulating a plan to improve satisfaction.

The initial plan was to auction 60 reserved spaces across campus along with exclusive access to a centrally-located surface lot with 125 spaces. To manage the parking facilities, controlled access systems were installed at the garages and lots that would be included in the auction. Auctions would be open to commuter students, faculty, and staff.

Bidder Paddles

Once the initial auctions were established, the type of auction format to use had to be selected. Many students were familiar with purchasing items on eBay, so the whole auction concept was not foreign. Our consultant recommended a Dutch format, or falling price auction.

Porter says, "The reason we selected this auction format was three-fold. First, we used the descending price auction (prices starting high and going lower) because we needed to know the upper end of the demand curve, since winners choose their spot based on the order of the bid (when they stopped the price). Second, this auction does not require a participant to keep checking in for the price to see when they should drop out. With a descending price auction, you need to only go in when the price approaches what you wish to pay to opt in (or place an initial bid at the price you are willing to pay and if the auction price falls below that amount, you would be a winner). It requires less vigilance on the part of



A Dutch auction is used for reserved parking at Chapman University.

the bidder. Lastly, our lab experiments show that it has excellent allocation properties with those valuing spots the most being able to get them."

Students enter their maximum bids as soon as the auction opens, but all auction winners pay the final bid cost for their spaces—the lower the bids on spaces or the fewer students bidding, the cheaper the final cost is for everyone. The bidding starts at $1,270 for a reserved space and drops from there. The first year, a reserved space went for $480 in addition to a $250 annual parking permit fee. The second year, a reserved space went for $350 in addition to the $280 annual parking permit fee. And last year, a reserved space went for $450 in addition to the $300 annual parking permit fee. We allow the market to determine the value of a reserved space.

For the exclusive access auction, where winners received exclusive access to a gated lot but not a specific spot, the price started at $275 and dropped from there. Spaces the first semester went for a no additional fee to get everyone acclimated. The next semester, access went for a $25 additional fee.

Hammer Down

Because we needed to auction off more permits than spaces due to fluctuating schedules of students, finding the proper number that leaves a reasonable expectation of finding a space without the lot sitting empty can be tricky. We have increased the number of permits available to win in access auctions each year to keep the lot at least 85 percent full.

Our challenge the first year was marketing and educating our community on why we were implementing the system, how to participate, and what exactly a Dutch auction was. The students who participated in the auction the first year and experienced an improved parking situation expressed great satisfaction with parking. Others on campus said the auction system seemed elitist, with those having the most resources able to purchase closer parking. To mitigate this, we applied for a temporary use permit to use a lot next to our film school as a low-cost parking lot. We have auctioned off access to this option for the past two years, using the Dutch auction format with the bid price starting at $50 and no additional annual permit fee. The final bid price is typically around $10 to $15, which gives faculty, staff, and commuter students a fairly convenient, low-cost parking option for an entire academic year.

Porter offers several suggestions for other schools that are interested in using parking auctions: "We learned quite a bit. First, no one reads email from Parking or Public Safety. Only when Public Safety put tables in front of [an underground parking structure] did commuter students learn about the auctions. Second, faculty sees parking as a right. As Don Shoup said, 'If the university is an ivory tower, parking is its moat.' Lastly, there is an intimate connection between parking and class schedules. More classes should be scheduled off-peak and prices for parking during peak times need to increase. There is a need for more dynamic pricing for parking if one is to use the current parking resources efficiently."

Chapman will continue to use the auction system to allocate reserved spaces on campus. As our parking landscape changes over the next few years due to a heavy cycle of construction, we hope to see the value of reserved spaces increase.

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