# *Rent* at Texas State University

By: Richard Cadena

Two-hundred-twenty-one-thousand-two-hundred pixels. That's what I had to work with on a recent production of the musical *Rent* at the new Patti Strickel Harrison Theatre on the campus of Texas State University San Marcos. It was my job to make every pixel count in support of the story of a group of young, struggling artists in the East Village amid the AIDS epidemic of the late 1980s and early 1990s.

The show is very well-written and it was so well-performed that it could easily entertain without a lot of production support. The talented cast carried the show with their singing, dancing, and storytelling, and it's easy to see why. The director was Kaitlin Hopkins, head of musical theatre at Texas State. She has spent over 30 years building an impressive

resume in professional theatre, film, television, and radio as an actor, singer, and director. Choreography was by musical theatre faculty member Cassie Abate, and Greg Bolin was the vocal coach and musical director.

But audiences have come to expect high production values because it serves to heighten the theatre experience. Many theatrical pro-
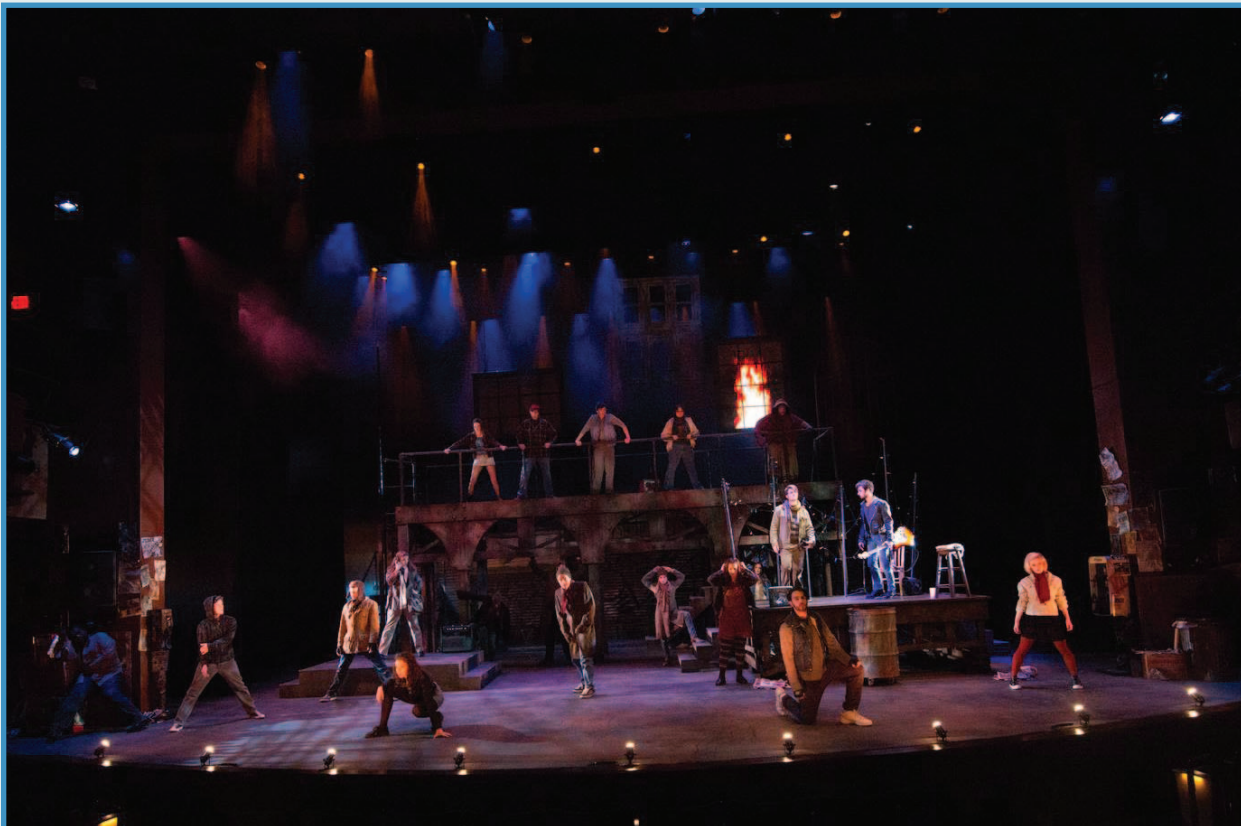
The cast performs "On the Street."

The restaurant scene ("La Vie Boheme").

ductions are now using video to enhance the visuals on stage. Hopkins wanted to bring video into her production of *Rent* because she thought that if it was used properly, it could add another dimension to the production. "I liked the idea of using video both as way to set up different locations in the show, and also to explore a different way of telling the story," she says.

Hopkins was particularly interested in using it in the scenes where voice mails figure prominently. She wanted to use the video to present them in a completely different way. "I have never responded to the voice mails in the show being done by the ensemble in the context of the show," she says. "I knew that if we videotaped them, with the ability to edit, if I shot those characters in tight close ups and just used footage of their mouths and eyes, we could create a great

video that would allow for some comedic moments."

Rob Rowland, a senior film student, expertly shot and edited the video, and they worked exactly as planned, drawing laughs in stark contrast to the darker parts of the story. But not all of the attempts at using video worked out.

"I was also interested in exploring having a live feed off of Mark's camera so we could watch it on video while he was shooting," Hopkins says. (Mark, one of the main characters, is an aspiring filmmaker.) The live feed was ultimately abandoned because of limitations of the budget and technology. Video latency essentially ransomed the idea.

Projection vs. LED
The use of video in the production was planned from the start, and Hopkins left the realization to the

design team. Scenic designer Tara Houston had the idea to project video on four screens that were trimmed to look like the windows in the main character's loft. In the beginning, we didn't know whether we would use front projection or rear projection, and from the very start I wondered if we could use LED displays instead, because I was concerned about the stage lighting washing out the projections. Houston was open to using LED displays, and, after some investigation, we managed to secure the use of some Chauvet Professional PVP S5 LED panels, thanks to Eric Mueller, of Chauvet.

The design called for projection screens that were about 8' high and 5' wide, but we could only get enough LED panels for two slightly smaller displays. Before the panels were hung, I wondered how well the smaller 5' x 6.75' displays, one in

portrait and the other in landscape orientation, would read from the back of the house. I also wondered about the 5mm pixel pitch. They worked better than I expected. Hopkins agreed.

"I had the same concerns," Hopkins says, "but I think they ended up being the perfect size. If they had been bigger, we may have discovered that they would have pulled focus from the stage more. I felt we achieved the perfect balance so it added to the story telling without detracting from it."

Never having used Chauvet Professional LED displays before, I was a little anxious about setting them up. I spent the better part of an afternoon testing them before they were rigged and flown on the counterweighted battens. Once they were up, it took only a few minutes to configure them with the VIP video processors. They were extremely bright; in fact, I dialed them down to the lowest brightness setting and still used the media server to dim them further in most of the scenes. The colors were spectacular, and, because of the tone of the story, I usually desaturated the bright, happy colors to make them more somber.

To serve and project

To feed video to the LED panels, we brought in a d3 Technologies system. It's one of the few media servers with a built-in visualizer that gives you the ability to previsualize the stage and projections using d3 Designer software. It runs on a Windows 7 or 8 PC, and it allows you to import an OBJ file of the stage or venue, create projection or display surfaces, put in content and get a good idea of what it will look like. You can create 3D OBJ files using third-party software like Maya, 3ds Max, Cinema 4D, or Blender, and then import it into the media server. I simply used the d3 Designer library and software tools to create a quick approximation of the venue, stage, and a few

scenic elements to get an idea of the proportions involved.

I also had a concern about how to trigger the media server from the lighting console, which was an ETC Ion. I thought the best approach would be to use DMX, but the d3 wants to see Art-Net or some other form of DMX-over-Ethernet. Since the Ion outputs Art-Net, it seemed straightforward, yet we couldn't get the console to talk to the media server through the Ethernet network. We could get the media server to ping the console but not the other way around.

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The d3 has a DMX monitor to prove that it's receiving DMX through Art-Net, and, in the process of troubleshooting, I had a Eureka moment. There on the media server was the name and phone number of Troy Fujimura, who soon became my go-to guy for all things d3. After a quick Saturday morning phone call, which he answered quickly and cheerfully, he suggested that we use MIDI Show Control (MSC) instead of Art-Net to trigger cues. Indeed, that was the right solution. In less than five minutes we were live and on line, connected to the console and triggering cues. Once we enabled MSC on the console and the media server, and made the wired connection with a MIDI cable, all we had to do was to label the cues in the media server to match the triggering cue in the lighting console, and then the console was in full control of the media server.

Using the lighting console to trig-

ger the media server meant that the stage manager, Trey Sanchez, would be a very important cog in the wheel. Since he was calling cues, he effectively controlled the timing of the media server playback. In a short amount of time he developed a really good feel for when the cues should be called, and his cue calling was spot on. According to his advisor, Shannon Richey, this was his first major show, but you would never know it by his performance.

Lit by Britt

Joel Britt, a senior lighting design student, was the lighting designer, with supervision by head of design and technology/lighting Sarah Maines. From the beginning, the interaction of lighting and video was a concern for both Britt and me.

"When the topic of projections and video were brought up in early design meetings," he says, "I felt a certain amount of apprehension because of previous attempts to incorporate projections into our productions. Those attempts met with limited success, or they were cut from the show when they failed to fit into the production."

He adds that video is a relatively new medium in theatre, and in the academic environment there is "very little budget and staffing to oversee [it]."

"I have also seen several attempts to use video and projection in professional productions which failed to support the story being told on stage," he says. "Every aspect of design for a show should ultimately support the story. I think it's critical for projections and video not to distract from the live performers. In the case of *Rent*, the director presented a clear vision of how she wished to use the projections, which eased my worries."

Britt was conscious of the delicate balance between the brightness of the projected images and the stage picture he was creating with the light-

Joanne (Helen Regula, left) and Maureen (Shelby Acosta, right) comfort Collins (Danezion Zeke Mills, center) after the death of Angel (Gino Chaviano).

ing. "My goal was to help the panels blend with the scenery by not back-lighting them with the cyc when they were dark, or, when they had dark images on them, to prevent them from looking like large dark holes in the cyc," he says. "Secondly, it was important to try to blend colors to avoid clashing with images on the panels."

We didn't really get to glimpse each other's work until very close to tech rehearsals, although Britt's research revealed plenty of clues about what to expect in terms of color combinations.

Tech week
Everything began to come together during the week of tech rehearsals.

"As we started to implement my initial ideas," Hopkins says, "I began to better understand other ways we could use the medium, and then things got really fun. Richard Cadena really helped me in this regard and exposed me to technology and things I didn't know were possible. For example, I didn't know that he could create animated footage from still images, like panning the interior of the apartment, or creating the effect of a flamethrower hitting a padlocked door and breaking the lock to pieces. I would say, 'I wish we could do that,' out loud, and Richard would say, 'I can; give me minute.' That was amazing!"

At the same time, incorporating video did add to the complexity of the production.

"The major hurdle we had," Britt continues, "was the very short time we had to integrate full tech into this very complicated show. The addition of projections and video meant another full layer of technology being added to a process that was already very tight on time. It's a full design element and, when done correctly, it requires the same amount of time and effort that costumes, sound, scenic, or lighting does to implement and tech."

"In a perfect world," Hopkins says, "we would have had another day of tech or an additional dress rehearsal where we could have devoted it to refining the lights and video. I am a bit of a detail freak, so it is hard to feel something was 'almost finished,' but I feel that way about every show. There is always more that you wish you had gotten!"

Everyone in the audience can interpret words differently, but when you are able to paint a picture with images and animation, you begin to create a more fully shared experience.

You can almost wrap the story around them and take them places that might otherwise be more challenging. It would have been nice to have 525,600 pixels and just as many minutes to perfect the show, but that's not how theatre works most of the time. It works not because we have unlimited resources, but because we make the best use of the resources we have, take creative risks, and pour ourselves, heart and soul, into it.

I was scheduled to leave for London before the last day of tech rehearsals, and did all I could to button everything up before going. But there's never enough time, and I didn't feel entirely comfortable as I got on the plane. Fortunately, Ashley Carrington filled in for me. The last few tweaks were emailed to her from London and she took care of them like a pro, thanks to the user-friendly d3 interface. When I returned a week later and saw the show for the first time, I was impressed by the talent and professionalism of the performance from the cast, crew, and entire creative team.

"The major achievement for the lighting and the projections," Britt says, "was the ability to quickly establish location in a very fast moving musical."

"The final product far exceeded my expectations," Hopkins says. "I loved that addition to our vision for the show, we ended up creating images that greatly added to the storytelling."