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Crafting a Traveling Icon: The Role of Mobile Carillons in Honoring Tradition

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CRAFTING A TRAVELING ICON:

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HONORING TRADITION

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Abstract

The purpose of this thesis is to explore the role of mobile carillons in honoring the traditions of carillonneurs and universities alike. I will first discuss the history of carillons and the tradition of carillonneurs, as well as the possible impacts of exposing the technical skill required to play such a public instrument that yet uniquely isolates the performer. I will then explain the various roles that mobile carillons have served and their gradual development over the years. The purpose of mobile carillons fluctuated, first beginning as a sales tactic, then a concert instrument—which eventually became a science experiment—a home salon instrument until World War Two, and then their triumphant return to a concert instrument. In honoring the tradition of universities, this thesis delves into the recent project completed by Iowa State University. In an effort to share carillon music, Iowa State carillonneurs use the mobile carillon as a replica of the iconic University campanile, serving as both a concert instrument and an outreach tool for students and alumni alike. This approach widely honors the traditional role of campaniles and carillons for educational institutions. To conclude, I interview a few professional carillonneurs about the feasibility of bringing a similar project to life here at the University of Northern Iowa as well as explore the impact a mobile carillon could have on inspiring the next generation of carillonneurs and protecting the dying art form.

Introduction

Calling out from above many city centers and university campuses for hundreds of years, bells have played a central role in keeping time, celebrating war victories, or conveying warnings to the people below. Their vast array of aural colors from the bright and bubbly high-pitched dings to the boomy and earth-shaking low-pitched dongs can be heard for miles. The condition of a town's bell tower and bells told passers-by the quality of the community, schools, and churches they would find there. Today, bells primarily serve town-centers as reminders of the passing time. While many even replace physical bells with electronic speakers, a few exceptions exist in which their artistry can still be heard. Carillons, a collection of chromatic bells, and carillonneurs are spread well throughout the United States, most commonly on college campuses. Their towers, referred to as campaniles, serve as places to meet, make new memories, and remember older ones as alumni relive their glory days. Some may even argue that the presence of a carillon and campanile on a campus enhance the 'university-student' experience, elevating it from being just four years of challenging classes. Yet, it is difficult for college recruiters to share this pertinent piece of campus that is better experienced. But what if it was not difficult? What if the carillon could travel beyond campus and share its music and memories wherever the road can take it? Mobile carillons have the ability to do just that. By putting the iconic instrument on wheels, mobile carillons can share the beloved experience everywhere it goes.

Carillon Background

Carillon Definition & Description

Originating in the Low Countries of northwestern Europe during the late medieval period, Carillons are described as a set of at least twenty-three stationary, tuned bronze bells that

together create a fully chromatic scale.[1] Historically, however, these bells do not always have to be fully chromatic. Often for cost and logistics' sake, the lowest C sharp and D sharp bells were omitted in the United States, as was the case at the University of Northern Iowa for many years.[2] After the first world war, as the carillon tradition spread across North America, eager townspeople and university leaders were willing to cut these costs to erect their instrument and war memorials as soon as possible. While this later complicated music selections as popular music began to seep into the modern use of the instrument, many carillonneurs or chimers simply transposed around the notes or adapted the arrangements to better fit their specific instrument. Another unique aspect of these instruments are the mechanisms that control how the bells are chimed. Contrary to popular belief, carillon bells are "hung dead" meaning they are affixed using a bolt and specialized joints to a stationary structure in which the bell itself never moves. [3] Because the bells are "hung dead," a series of wires and levers control the chime by moving the clapper to strike the inside of the stationary bell. Due to this complex system of moving parts, a unique playing touch was adapted early on, and continues to be passed down through formal carillonneur schools. Carillonneurs are trained here to strike the baton keyboard (stokkenklavier) with precise weights to play the desired tunes with dynamic and articulate accuracy.[4] This differs greatly from the most commonly compared piano technique as once the bell is struck, it cannot be silenced or dampened.[5] Because of this, carillonneurs must adjust their touch to match the

[1] Luc Rombouts, "Carillon," Grove Music Online, 2001; Accessed 11 Feb. 2024, 10.1093/gmo/9781561592630.article.04929.

[2] "About Carillons," The Guild of Carillonneurs in North America; Accessed 11 Oct. 2023, https://www.gcna.org/about-carillons.

[3] "The Singing Tower," Bok Tower Gardens, 9 June 2023; Accessed 11 Oct. 2023, https://boktowergardens.org/the-singing-tower/.

[4] Luc Rombouts, "Carillon."

[5] "The Singing Tower," Bok Tower Gardens.

duration and dynamics of each note for melodic clarity. To assist with the precise touch required, springs are typically used to ease and evenly temper the stokkenklavier.

No two carillons in the world are exactly alike. Each differs in their number of bells, distance from the bells, keyboard design, and tower specifics. For example, the largest carillon in North America houses seventy-seven bells and is located in Bloomfield Hills, Michigan.[6] One common tool used to classify carillons is specific to the weight and size of their bells. The two groups are labeled 'heavy' and 'light.' As Luc Rombouts explains, a "heavy carillon" is classified by the "lowest c linked to a c' bell weighing about 2200 kg or more" and a "light carillon" is classified by the "lowest c key linked to a g' bell weighing about 650 kg or less." [7] The heavier carillons tend to express boomier, louder tones with long reverberations while the lighter ones are seen as more transparent because their tones vibrate for a shorter period of time. To account for this, each bell tower and chamber are specifically designed and adapted to fit the acoustic characteristics and classifications of the carillon housed within. Each bell chamber built must also take into consideration the current number of bells it holds as well as any additional bells that might be later added.

North American Carillon Tradition

From the end of the fifteenth century, carillons flourished in European cities symbolizing freedom and signaling the excellence of the town. They began as delicate systems requiring a group of beyaerders (more commonly known as beiaards) who rang sets of bells by pulling ropes connected to the clappers.[8] Beiaards were trained and specifically worked together to coordinate

[6] "Carillons," World Carillon Federation; Accessed 23 Sept. 2023, http://www.carillon.org/eng/fs_muziek.htm.
[7] Luc Rombouts, "Carillon."
[8] Luc Rombouts, "Carillon."

timed pulls that would together create a tune. This art certainly lacked efficiency, however, and thus was soon replaced with mechanical systems, which then later evolved around 1510 into the baton keyboard used today that enables multiple bells to be played by one carillonneur.[9] Unfortunately, most of these instruments were limited to only two octaves due to a lack of tuning techniques. It was not until the seventeenth century that the Hemony brothers and carillonneur Jacob van Eyck were able to develop a more precise tuning technique.[10] By placing the bell on a lathe and chiseling out a small amount of metal from the inner surface of the bell, the brothers could even tune the overtone partials that color the strike note, the note that gives the bell its name. This advancement in bell tuning technology proved to be substantial when it came to the overall evolution of the instrument.

Towards the end of the eighteenth century with the gaining popularity of salon music and intimate concert settings, the tradition of carillon music began to die out. Audiences preferred the social prestige that came with these smaller exclusive performances, as opposed to performances with larger audiences. Carillon music did not resurge again until the turn of the twentieth century. Following the first world war, Belgian carillonneur Jef Denyn and American William Gorham Rice began to delve into the art of the ancient war instrument that once symbolized freedom.[11] Rice's in-depth writings about the instrument and its symbolism, along with the conclusion of World War One made the carillon the ideal instrument to memorialize the war heroes. Soon, the carillon culture of North America began to rapidly expand with the help of John Taylor and Company's evenly tempered bells and willingness to export their product from their foundry in Loughborough, England to the United States.[12] Taylor Foundry bells make up

[9] Luc Rombouts, "Carillon."
[10] "About Carillons," The Guild of Carillonneurs in North America.
[11] "About Carillons," The Guild of Carillonneurs in North America.
[12] Luc Rombouts, "Carillon."

one of the two university carillons in Iowa—the Iowa State University Stanton Memorial Carillon. As the Keldermans explain, these modern carillons paved the way for what we have today because they were "English-made; the bells were cast and tuned using the latest scientific discoveries; the keyboard reflected thoughtful craftsmanship; and the mechanisms were engineered to with-stand long use." [13] Longevity, new technology, and personalized craftsmanship fit the needs of the American consumers looking to purchase these grand instruments. Today, there are roughly 180 carillons in North America; however, most of them remain dormant as universities and cities do not have the necessary funding or resources to staff a full-time carillonneur.[14] With a lack of carillonneurs to cover the existing carillons, community members or students who are familiar with keyboard instruments are often tasked with teaching themselves to play the carillon in order to keep the community tradition alive.

History of Mobile Carillons

History of Traveling Carillons

Unlike traditional carillons, the history of mobile carillons began fairly recently around the year of 1930, and has yet to broaden much across the continent. As a student and admirer of Jef Denyn, Nora Johnston, one of two active female carillonneurs from England during this time, was inspired to create an instrument that she could use to employ herself after observing a lack of open carillonneur positions. Beginning around 1933, Nora ordered a practice keyboard and soon built and developed herself the first-ever mobile carillon instrument complete with a silent keyboard, sounding bars (as opposed to bells), and a resonator.[15] While the mobile carillon was

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[13] Karel Keldermans and Linda Keldermans, *Carillon: the Evolution of a Concert Instrument in North America* (Springfield: Springfield Park District, 1996), 46.

[14] "About Carillons," The Guild of Carillonneurs in North America.

[15] Luc Rombouts, *Singing Bronze: a History of Carillon Music* (Leuven: Leuven University Press, 2014), 245-6.

meant primarily to protest the lack of available jobs, it did much more and opened a world of performance opportunities. Johnston took the once stationary and solo instrument on tour of the United States in 1938 where it was featured in commercials, radio shows, and even in a combined concert with an orchestra.[16] The carillon tour proved beneficial in spreading the art form and the variety of possible musical venues and collaborations of the carillon. Later, Arthur Lynds Bigelow unknowingly carried on the tradition that Nora had begun. Bigelow crafted a set of 42 light bells which he played with two felt-coated hammers.[17] This set, which traveled in two crates, was more ideal to the indoor salon setting as opposed to Nora's boisterous outdoor and concert hall settings. The portable carillon would again fail to gain popularity and fizzle out before 1940 with the ongoing World War Two.

Nearly a decade later in 1949, mobile carillons began to gain popularity once again. This time, however, bell manufacturers instead of performers were seeking new venues. During the resurgence of carillons, a mix up at the Eijsbouts factory produced a carillon for Wervershuizen, a non-existent town rumored to be in Holland. After sitting unclaimed and unpaid for on the factory floor, the Wervershuizen carillon was converted into a savvy marketing ploy for the Eijsbouts factory. The carillon was mounted on a truck and became the first ever mobile carillon with real bells.[18] While stationary in the factory and on the road, it served as a prototype for customers to see what the company could produce before making such a large investment. This 'playable advertisement' traveled throughout the Netherlands in 1949 and 1950 promoting the accessibility of the instrument and encouraging many to purchase carillons of their own from the company.[19] Using the Hemony brother's bell profile and tuning technique, the bells were fully

[16] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 245-6.
[17] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 247.
[18] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 272.
[19] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 273.

chromatic and offered a tune that towns could not resist, resulting in an increase of sales carillons throughout the Netherlands. In 1949, Cyril Johnston, brother to Nora Johnston, began working with Eijsbouts on ways to further develop the mobile carillon. Sadly, he was never able to build upon his sister's original design as he fell sick and passed away in 1950.[20] After his death, Eijsbouts ceased to explore the development of a performance-worthy mobile carillon and thus the instrument remained an advertising tool.

Over in the United States, carillon manufacturers continued to use mobile carillons as demonstration instruments to sell stationary instruments. In the 1960s prominent carillonneur Wendell Westcott happily played the Petit & Fritsen mobile carillon as it was hoisted from the boat.[21] This mobile carillon, unlike Eijsbouts' model, was not attached to a vehicle. The frame contained a set of thirty-five chromatic bells, a baton keyboard/pedal board, a music rack, an attached bench, and a curtain that could be drawn to conceal the carillonneur's area. Modern mobile carillons strictly for performance purposes did not gain traction until 1976 with Larry Weinstein. For four years, Weinstein performed on the light three-octave Petit & Fritsen carillon throughout the United States and Canada. Funded by Verdin and later by Pepsi-Cola, the instrument frequented summer recital series, shopping malls, and fairs drawing the attention of folks who had never experienced the instrument up close.[22] In 1979, Weinstein was forced to suspend the performances due to a lack of funding. In 1986, another Eijsbouts mobile carillon briefly appeared as the foundry displayed its first-ever major-third bells for the instrument at the World Carillon Congress; however, the new tone coloration proved to be too much for those who were used to the traditional minor third.[23] Tone coloration here refers to the tuning of the bell

[20] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 273.
[21] Keldermans and Keldermans, *Carillon: the Evolution of a Concert Instrument*, 92.
[22] Keldermans and Keldermans, *Carillon: the Evolution of a Concert Instrument*, 150.
[23] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 301.

harmonics. In bell tuning, the bell has a strike note and various overtones that ring to color and reinforce the strike note. For example, if a bell's strike note is A the minor third tuning will include hints of C natural to color and reinforce the strike note A. However, Eijsbouts major third meant that the strike note A had hints of C sharp that slightly obscured the way the strike note A was reinforced. The slight harmonic adjustment thus made the strike note sound slightly out of tune to the listeners who were used to the minor third coloring although it was technically, by the commonly used equal-temperament tuning system, still in tune. Further use of major third tuning was quickly eradicated and along with it, mobile carillons. Moreover, the approaching turn of the century and new video technology replaced the need for companies to keep the mobile playable advertisements on hand. At the same time, a continuation of Nora Johnston's collaborative work began once again to gain interest among carillonneurs. Most notably, French-trained carillonneur, Frank DellaPenna, picked up the mobile carillon tradition in 1991 when he began his show, *Cast in Bronze*. *Cast in Bronze* is one of the only two mobile carillons recognized by the World Carillon Federation in the United States remaining. [24] Both mobile carillons are proudly owned by Frank DellaPenna and operated out of Pottstown, Pennsylvania, entrancing audiences across the country.

Construction

Throughout their evolution, mobile carillons have continued to change to adapt to the needs of the carillonneurs and foundries using them. From Johnston's first frame and sounding bars concept to Eijsbouts mounted bells on a truck, each instrument was constructed with a specific purpose in mind. Today's modern mobile carillons, operated by Charlie St. Cyr-Paul, of *Bells 2 Go*, and Frank DellaPenna, of *Cast in Bronze*, seamlessly combine both constructional

[24] "Carillons," World Carillon Federation.

concepts. St. Cyr-Paul's *Bells 2 Go* mobile carillon sits upon a custom trailer that is "approximately 10 feet long, 7 feet wide, and stands just under 9 feet tall." [25] The thirty-five-bell instrument certainly requires a sturdy frame as the whole thing weighs over four tons. Frank DellaPenna's *Cast in Bronze* carillon is similar, sporting thirty-five bells and weighing in at just over four tons (8,370lbs); on the contrary, the wooden frame measures out to be 21 feet long, 8 feet wide, and 10 feet tall.[26] Both carillons are mounted on trailers that are easily pulled by a double-wide pick-up truck which is part of what makes them so versatile and perfect for solo touring across the United States.

In shifting to the University use and purpose, the Iowa State University mobile carillon model is quite different. With twenty-seven bells, this instrument technically meets the carillon criteria previously outlined; however, because of its lack of a pedal board, the World Carillon Federation has yet to recognize the recently added instrument. The portable model, as it is referred to, is broken into three separate sections. The main section which houses the baton keyboard contains nineteen bells and a scissor lift for the main decorative facade which expands the height of the overall structure from 6.5 feet to 21.5 feet.[27] It is complete with four working clocks. The two other sections house the remaining eight bells and attach prior to the performance.[28] In total, the structure weighs just over a ton (2,800 pounds). Unlike the two trailered carillons, Iowa State's mobile model requires much more coordination. Due to the weight and detachable features, the instrument must be transported by box truck and maneuvered

[25] Bells 2 Go, "The Only Touring Carillon in North America!!!" Bells 2 Go; Accessed 23 Sept. 2023, https://bells2go.com/faqs.
[26] Greg Okuhara, "Pennsylvanian Brings Carillon to Texas Renaissance Festival," McClatchy-Tribune Business News, September 28, 2006.
[27] Erin Rosacker, "Have Carillon, Will Travel," Inside Iowa State for faculty and staff, October 31, 2019.
[28] Erin Rosacker, "Have Carillon, Will Travel," 2019.

with the help of a pallet jack.[29] The overall setup requires much more time than simply parking, leveling, and making minor repairs. The instrument must be positioned, the levers must be reconnected, and the facades must be assembled before a note can be played. One prominent feature of the Iowa State model is that it is an exact 1:5 scale of their campanile with a detached bench made from trees surrounding the campanile.[30] For the purpose of the university, and their target audience, the nostalgia behind the small details are far greater than the efficiency of their travel logistics.

Mobile Carillon Specifics

Design

Mobile carillons are unique in that unlike traditional stationary carillons, they must fit specific weight and width requirements to travel to their concert destinations while maintaining the same feel and action components as their stationary counterparts. One way in which they maintain the action components is through the wire distance. As the Guild of Carillonneurs of North America explains, when the keyboard is located close to the bells, the mechanical connections can be much shorter which allows for more precise playing by the carillonneur.[31] In a typical stationary carillon, the bells would be placed above the carillon manual. To achieve the shorter connections with a mobile carillon, the ideal bell positioning is in front of the carillonneur and tucked back behind the baton keyboard.[32] This connection increases the visibility of the carillonneur. The position of the bells on the mobile carillon does come with a

[29] Stacey Maifeld, "Model Will Allow Iowa State's Iconic Campanile and Carillon to Travel Beyond Campus," LAS News, October 16, 2019.
[30] Rosacker, "Have Carillon, Will Travel," 2019.
[31] "About Carillons," The Guild of Carillonneurs in North America.
[32] Frank DellaPenna, interview by author, phone call, October 23, 2023.

few precautions: most carillonneurs must wear ear protection while playing. Dissimilar to the thick cement slab that protects carillonneurs from the loud vibrations within the bell chamber entering the playing cabin, the bells in the mobile carillon are in such close proximity that the vibrations over a long period of time could potentially be harmful to the hearing of the carillonneur.

The action of the mobile carillon can also slightly differ due to a lack of standardization of the carillon baton keyboard in general. When comparing his practice instrument to the mobile carillon, Charlie St. Cyr-Paul of *Bells 2 Go* noted that the "spacing of the keys is different, the alignment of pedals are totally different, [and] the battens are twice the length" of his practice instrument.[33] These slight differences make practicing on the mobile instrument more ideal when working through difficult performance passages. It should be noted that, almost all carillonneurs experience this adaptation—stationary or not. While there have been many pushes for standardization to solve this issue, nothing has quite stuck so the propensity for the practice instrument to be slightly different from the performance instrument is just something carillonneurs have to accept.

In uncovering more of the design logistics of how the bells of the *Bells 2 Go* mobile carillon are arranged on the trailer, Charlie St. Cyr-Paul explains that "to fit so many bells in a small space requires breaking the rules of ergonomic and proper angles, leverage, and balance. There are so many unknown variables." [34] With the width requirements and girth of many bell profiles, mobile carillon designers must construct a way to creatively hang the bells within the structure so that they fit physically and harmonically. For example, the bells that makeup UNI's carillon are hung with the largest and lowest bells on the upper level and decrease in size as they

[33] Charlie St. Cyr-Paul, interview by author, e-mail message to author, October 17, 2023.
[34] Charlie St. Cyr-Paul, interview, October 17, 2023.

descend levels. On the lowest level of the three-tiered structure, there are two beams of bells. The outer beam holds the mid-range bells, while the inner beam holds the high treble bells with the highest-pitched treble bells connecting on an arched beam opposite of the lowest bells in the bell chamber. This unique design not only fits the bell shapes adequately to make the most out of the space, but it also allows for the treble-colored tone to cut through the bass vibrations. (See Figure 9)

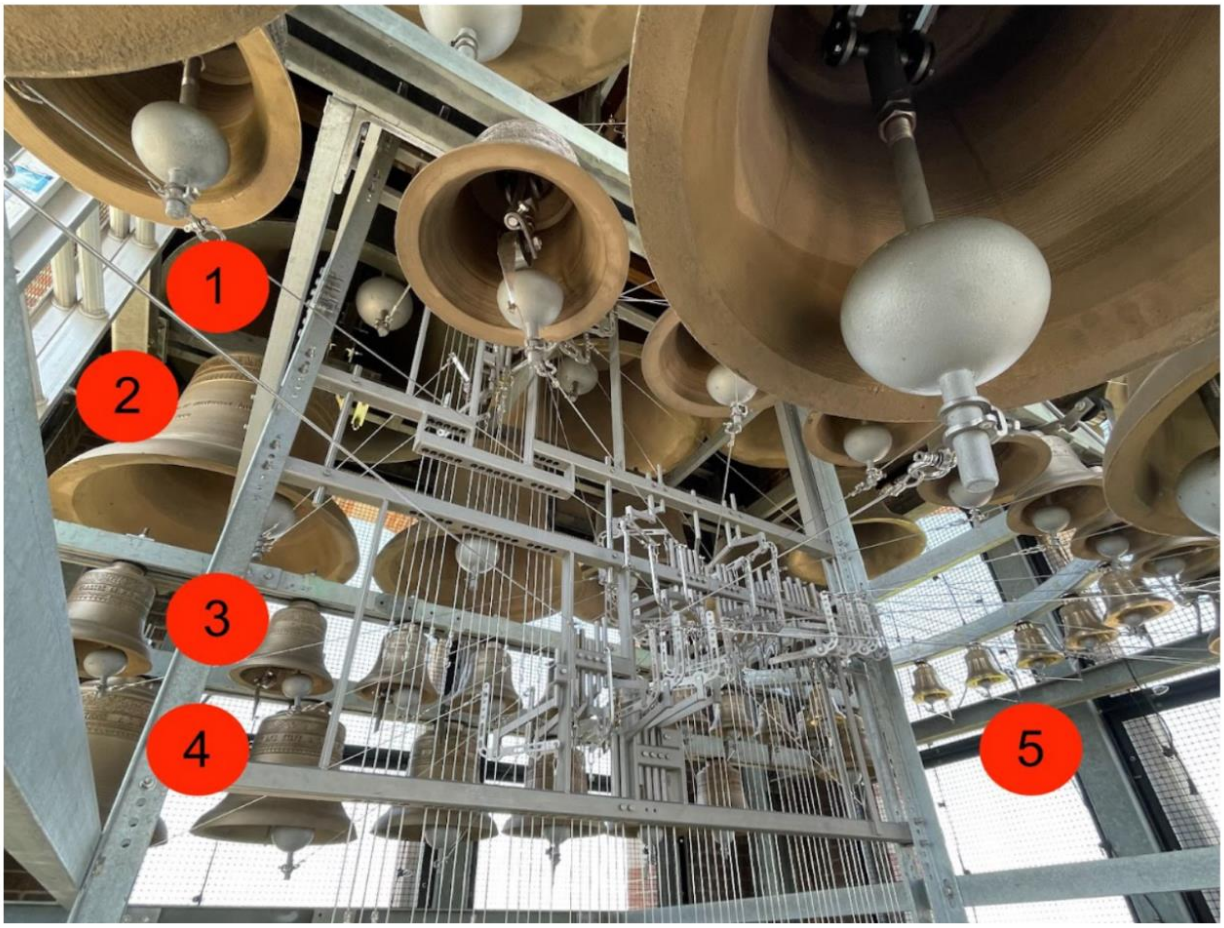

Figure 9 The University of Northern Iowa's Belfry May 26, 2023.
(1) Top tier of the belfry/bass bells, (2) Lower range bells, (3) high treble bells,
(4) lowest tier of the belfry/mid-range bells, (5) highest treble bells on the arched beam.

It seems obvious, but the fourth element to consider is the wear and tear of travel that can break down the instrument as well. Differing from a stationary carillon, the bells in the mobile carillon experience a vast array of climates and environments with varying temperatures, levels

of humidity, and overall weather conditions. One of the greatest advantages of the bronze bells is that bronze is a unique metal in that its properties do not allow its particles to fluctuate within the range of possible outdoor temperatures, preventing it from falling out of tune. As explained in an article from the Guild of Carillonneurs in North America, "a bell's greatest enemies are fire, which can destroy the bell, and air pollution, which dissolves the bell metal." [35] No matter the weather, the bells will remain perfectly intact, it is just the smaller connections often made of steel that are prone to needing consistent repairs and adjustments. The mobility can also often make it difficult to find a level area. Because of the dead hung bells and active clappers that rely on gravity, carillons need to be level to be accurate. Stationary carillons are always level—unless there are greater structural concerns, in which the carillon is most likely the least of the carillonneur's worries. As Charlie St. Cyr-Paul explains,

> Playing a mobile carillon requires a way to stabilize the environment… having a level location, dependable transport system, and [the] accessibility to make adjustments (often) on the fly are all a part of being a mobile carillonneur. [36]

Setting up mobile instruments like these requires a lot more than simply parking and playing. Since carillon technicians are not as readily available as a tire repair shop, carillonneurs must be trained in all aspects of the mobile carillon and must know how to fix everything that could go wrong while out on the road traveling to their next performance.

Performer Visibility

The act of playing the carillon is quite physical and belies the light tingling of the bells that most onlookers hear from below. Frankly, what most people imagine, according to Luc

[35] "About Carillons," The Guild of Carillonneurs in North America.
[36] Charlie St. Cyr-Paul, interview, October 17, 2023.

Rombouts, is "an older, somewhat tough and corpulent man." [37] While that was the trend many years ago, today anyone with basic keyboard understanding and a passion for bells can be a chimer. It is important to note that for musicians to become recognized carillonneurs, they must attend specialized schooling such as through the North American Carillon School and receive a Carillon Proficiency Degree and Performance Degree. Musicians who simply have access to carillon and play the instrument as a hobby are considered chimers. Nevertheless, it is difficult to debunk the perception that all carillonneurs and chimers alike are old men, especially when the job is quite invisible aside from the short blips that can be shared on social media. This is where the mobile carillon proves to be vastly different compared to its stationary counterpart. Bringing the carillon to the more visible ground level allows everyone to get a chance to see the impact that the physical art form of playing has to take the music elsewhere.[38] The carillon takes an incredible amount of coordination to play; however, when we humanize the instrument, it becomes a lot more accessible to listeners and certainly less mysterious.

As mentioned earlier, *Cast in Bronze* and *Bells 2 Go* are the only two recognized mobile carillon shows with carillonneurs Frank DellaPenna and Charlie St. Cyr-Paul. While both use a similar instrument set-up, their actual performance is quite different. Frank DellaPenna, better known as the 'spirit' of *Cast in Bronze*, chooses to mask his identity during his performance to further establish the carillon's legitimacy as a concert instrument.[39] DellaPenna performs dressed in a black robe with a gold mask to "help audiences focus on the bells and their unique sound" much like they would if he were in a carillon tower.[40] This approach keeps the focus primarily on the bells and technique and away from the dramatics of playing. In an interview, DellaPenna

[37] Luc Rombouts, *Singing Bronze: a History of Carillon Music*, 314.
[38] Karel Keldermans, interview by author, Cedar Falls, October 13, 2023.
[39] "About," Cast in Bronze, 2020; Accessed September 23, 2023.
[40] Greg Okuhara, "Pennsylvanian Brings Carillon to Texas Renaissance Festival."

stated that he believes that "after the first song, [audiences] forget it is a human being playing" and that they "get lost in the show." [41] Ideally for DellaPenna, this approach falls in line with his ultimate goal of keeping the music and instrument the primary focus of the performance as opposed to using it as an opportunity to expose the embodied emotions of the performer.

Unlike Frank DellaPenna, Charlie St. Cyr-Paul takes a more visible approach to his performance with *Bells 2 Go*. St. Cyr-Paul performs unmasked and often uses his clothing, makeup, and vibrant light shows to liven up his concerts.[42] This method encompasses the physical art form and allows for St. Cyr-Paul to highlight the training and various techniques used by carillonneurs in performance. St. Cyr-Paul says that he primarily uses his appearance to present himself transparently and honestly as the artist he is and chooses to be.[43] In contrast to their impersonal interaction with Frank DellaPenna, audience members get to know St. Cyr-Paul this way and get to interact with his unique carillon stylings differently through his prominent performance practices. This would not be possible had he been performing in the playing cabin of a traditional stationary carillon. Audiences can physically see his musical intentions as expressed through his facial expressions and body language. Highly visible performances such as St. Cyr-Paul's work to establish the carillon as a legitimate soloistic concert instrument where the instrument is an extension of the performer. Conversely, DellaPenna's shrouded physical approach as the 'spirit of the bells' highlights the physical techniques required to manipulate the instrument in time such as what would be required in ensemble performances.

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[41] Greg Okuhara, "Pennsylvanian Brings Carillon to Texas Renaissance Festival."
[42] Charlie St. Cyr-Paul, interview, October 17, 2023.
[43] Charlie St. Cyr-Paul, interview, October 17, 2023.

A Mobile Carillon for UNI

Establishing a Need

Established in 1926 as a monument to UNI students lost in the first world war, the University of Northern Iowa's campanile and carillon are central to many UNI student traditions, and what it means for students to embody the 'Panther spirit.' As former UNI President James Maucker stated in his endorsement of the 1968 renovation and expansion of the carillon, "the college needs symbols and traditions and aesthetic elements which are not of immediate practicality, but which have an influence over a long period of time on many generations of students." [44] The campanile and carillon over these past fifty years have proved to serve as that influence and will no doubt continue to. A survey study completed in 2018 by UNI honors student and student chimer, Samuel Thomas Ogilvie, concluded that students strongly support the carillon and that they are "willing to put value, measured in an investment of resources into [the carillon's] future." [45] Whether or not this would transfer to a mobile version of the carillon and campanile can best be predicted through the experience of Iowa State University's model carillon and campanile. Their carillon model, which is a replica of their Edgar W. and Margaret MacDonald Stanton Memorial Carillon and Campanile, continues to be used for University outreach events, and as an educational tool not only in its display but also in its construction process.[46] Engineering students at ISU designed and constructed the model as a capstone project using funds raised through alumni donations. Small details such as bell dedications, specialty benches from trees near the campanile, and interactive light displays make the carillon model

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[44] Susan Witthoft and Gerald L. Peterson, "Campanile," Campanile Special Collections & University Archives; Accessed February 11, 2024, https://scua.library.uni.edu/.

[45] Samuel Thomas Ogilvie, "The role of the University of Northern Iowa Carillon: A Study in the Future Purpose of a Campus Landmark," (Honors Program Theses, 346, 2018), 10-11.

[46] "Campanile-Carillon Model | Department of Music and Theatre," n.d.; Accessed February 11, 2024, https://www.music.iastate.edu/campmodel.

accessible to all regardless of their musical or physical abilities.[47] In some way, donors purchased themselves a new way to interact with the beloved campus icon.

While UNI does not have a mobile carillon, the student Guild of Carillonneurs created a similar experience for donors. During the Return of the Bells event hosted at UNI in May of 2023, folks from all around Iowa flocked to the campanile for a chance to interact with the bells while they were on the ground. Part of the programming that week included a thank you event for project donors. In preparation for the event, the student guild arranged for their old Petit & Fritsen carillon to be moved out to the Commons Plaza on campus. The keyboard batons were taped and labeled, and a display board was crafted to allow for attendees to try their hand at chiming. Student guild members assisted donors and visitors of all ages and musical abilities. The high levels of engagement with the instrument during the event demonstrate the possibilities of interactions between UNI students new and old if we were to obtain a playable mobile carillon/campanile model of our own.

Cost

As with anything, cost is a major factor in determining the feasibility of building a mobile model carillon. The estimated price of a singular bass bell for a mobile carillon can go for around $60,000.[48] However, that is just a bell—not the whole instrument. Carillonneur, Charlie St. Cyr-Paul, lists his *Bells 2 Go* mobile carillon for a whopping $750,000.00 on his website.[49] St. Cyr-Paul's mounted setup would be ideal, but his price factors in the cost of him to purchase a new instrument and is unrealistic for university purposes. More realistically, if the University of

[47] Erin Rosacker, "Have Carillon, Will Travel," 2019.
[48] Frank DellaPenna, interview, October 23, 2023.
[49] Bells 2 Go, "The Only Touring Carillon in North America!!".

Northern Iowa were to have the Verdin Company, the current bell technician for the UNI campanile and carillon, construct a mobile carillon, Frank DellaPenna estimates that the cost for a simple three-octave instrument would be closer to $200,000 with the omission of the bass chromatic C sharp.[50] Keeping with the purpose of the instrument, the D sharp bell is considered necessary to the instrument as this is note is used in the UNI Fight Song. Nonetheless, DellaPenna's estimation is slightly more accurate that St. Cyr-Paul's given that Iowa State University's carillon model project cost around $225,000 and included additional electrical features and a fully chromatic set of bells.[51] Besides the fully chromatic bells, Iowa State's model only has twenty-seven bells and no pedal board, whereas UNI's proposed mobile carillon would have thirty-five bells and a pedal board. It should be noted that even with their limited bells, the Iowa State mobile carillon model is still able to perform a great deal of popular tunes.

Timeline

The construction of a carillon historically has been a primarily community-oriented task. Even back in the medieval times, local craftsmen would produce the keyboard and the necessary clappers and connections, leaving the bells to the professional foundries.[52] While Charlie St. Cyr-Paul's was provided by Frank DellaPenna through a project with a foundry, and DellaPenna's was gifted from an anonymous instrument collector; Iowa State University kept with this tradition and constructed their model in collaboration with the University's capstone engineering classes. Their mobile carillon project was first pitched to a project team in the Spring of 2015 by Cownie Professor of Music and University Carillonneur, Dr. Tin-Shi Tam.[53] Over the next two

[50] Frank DellaPenna, interview, October 23, 2023.
[51] "Project Timeline," Project Timeline | Department of Music and Theatre; Accessed February 11, 2024, https://www.music.iastate.edu/campmodel/timeline.
[52] Luc Rombouts, "Carillon."
[53] "Project Timeline," Project Timeline | Department of Music and Theatre.

years, students collaborated to build a design that satisfied all of Dr. Tam's requirements. In the Spring of 2018, Ohio-based foundry Meeks & Watson arrived on campus and began casting the bells, and by the Fall of 2019 the model was fully functional.[54] From conception to completion, the project took just over three years. However, it is important to note that engineering students are continuing to refine the model each year looking for ways to make travel, set-up, and tear-down more efficient for the carillonneurs. It is unclear how long the process would take for the University of Northern Iowa to acquire a similar mobile campanile/carillon model, but with the help of Dr. Tin-Shi Tam and support from the UNI community, it is possible to closely follow the exact same three-year timeline.

Design Requirements

Keeping the purpose of this proposed instrument in mind, certain design consideration must be taken into account. In the inception of her mobile carillon model, Dr. Tin-Shi Tam presented the engineering capstone with this list of requirements:

> [The mobile carillon must have] easy assembly, good acoustics and indoor/outdoor use…visible mechanisms, allowing viewers to see the bells being struck as the instrument is played…a 16-foot custom hydraulic trailer and a tower lift system. A pallet jack would transport the model, with sections small enough to fit through double doors and on elevators… A collapsible tower framework and detachable panels [to] create the campanile's likeness. [55]

The finished product included all of these components, however, negating the inclusion of a pedal board to go along with its baton manual. [56] The pedal board is not the most important aspect of this model, but it is what keeps most from recognizing it as a fully functional mobile

[54] "Project Timeline," Project Timeline | Department of Music and Theatre.

[55] Erin Rosacker, "Class Designs Playable Carillon Model," Inside Iowa State for faculty and staff, April 28, 2016.

[56] Erin Rosacker, "Have Carillon, Will Travel."

carillon. Another challenge of Iowa State's mobile carillon is the set-up time. From parking to playing, the instrument takes over an hour and requires multiple people to lift and assemble the facade model. Not to mention, the model must also be transported using a box truck and pallet jack.[57] The model's indoor/outdoor versatility in some way is its greatest design flaw when it comes to mobile efficiency.

After reflecting upon this, Frank DellaPenna presents the following adapted requirements:

> Three octaves at least (C4-C7)—excluding low C sharp 4 to cut back on costs and additional weight— a system to allow for an easy twenty-minute park-to-play set-up, the use of stainless-steel parts to prevent rust, the ability to fit in an 8 foot to 10-foot garage for storage during the winter months, an adjustable bench that is attached to the instrument, and for it to be mounted on a trailer that can be easily hauled by a heavy-duty pickup truck. [58]

Each of the design requirements set forth by DellaPenna are either additions or slight adjustments to the Iowa State Carillon model. Dr. Tin-Shi Tam's ambitious choices were quite impressive and certainly continue to serve the need to share the University image alongside the music. Plainly, DellaPenna's suggestions blend the plans of the traditional mobile carillon he owns with the Campanile/Carillon Model to fulfill the greater purpose of the project. There are a few other considerations, though, that must be taken into account with this project. As with any instrument on the road, DellaPenna stresses the importance of having financial support and staff on campus trained to make necessary adjustments or repairs to the instrument should something go awry.[59] This was also a challenge that Charlie St. Cyr-Paul echoed stating that he makes

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[57] Stacey Maifeld, "Model Will Allow Iowa State's Iconic Campanile and Carillon to Travel beyond Campus."

[58] Frank DellaPenna, interview, October 23, 2023.

[59] Frank DellaPenna, interview, October 23, 2023.

"significant time investments to allow for unforeseen challenges while traveling." [60] Everything from a loose spring to a blown tire can damper the playability of the delicate instrument, which is why it is imperative to have trained carillonneurs with these instruments. While UNI currently does not have a full-time carillonneur, this responsibility would primarily fall on the student guild of carillonneurs. But this is something that they could all easily be trained on as they currently learn how to make minor adjustments to the stationary instrument from visiting carillonneur, Karel Keldermans. Learning to make repairs certainly takes time and energy, but both DellaPenna and St. Cyr-Paul resonate that the preparation is worth it in the long run to ensure the longevity of the mobile carillon.

Promotion

Any person with fundraising experience will agree that no one simply wants to open their pocketbook and throw money at another campaign. They want to be a part of it, they want to buy into the idea that is being sold, and to be invested in more ways than one. Per Ogilvie's 2018 survey study, UNI students believed the additional funding for campanile projects should primarily be sought out through private donations first, with university funding coming in at a close second; and less than half of the student participants believed that their student fees should be used to fund the Campanile project.[61] Six years later and on the heels of a major Our Tomorrows Campaign donor push, it would be understandable if donors felt exhausted with their giving efforts and did not as accurately reflect the 2018 study. That is the case, as observed through a recent final push for the campanile plaza that only reached 61% of its $50,000 goal.[62]

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[60] Charlie St. Cyr-Paul, interview, October 17, 2023.

[61] Samuel Thomas Ogilvie, "The Role of the University of Northern Iowa Carillon: A Study in the Future Purpose of a Campus Landmark," 15.

[62] "Campanile Plaza Renovation," Give Campus UNI; Accessed March 5, 2024, https://give.uni.edu/campanile-plaza-renovation/?a=7565380.

To fight donor fatigue and give donors a glimpse of what they are funding, Frank DellaPenna suggested hiring either him or Charlie St. Cyr-Paul to visit and give a few shows on campus.[63] Not only would this allow folks to begin buzzing about the new project, but it would also allow them to interact with what is already feasible and begin exploring the various ways in which it could be made unique to the University of Northern Iowa.

Once the mobile carillon is constructed, there exist endless possibilities for its performance venues. The Iowa State mobile carillon frequents state and county fairs drawing alumni, students, and faculty together off campus.[64] Outreach is one of the greatest tools for non-music people, however, the musical collaborations with this instrument are also quite boundless. A growing repertoire featuring tasteful works for collaborative carillon creates opportunities for the carillonneur to play well-known tunes with other instruments such as brass or orchestra.[65] Frank DellaPenna and Charlie St. Cyr-Paul do this quite often with small ensemble collaborations. St. Cyr-Paul participates with his mobile carillon in a gothic rock band, Sanctus.[66] While the vision is certainly not to turn the University of Northern Iowa's mobile carillon into a rock show, it highlights the variety of possible musical opportunities with this unique instrument. Collaborations with other instruments in this way, closely relates back to the similar stumblings of Nora Johnston when she toured with her mobile carillon in the U.S.[67] A mobile carillon also could impact the larger Cedar Valley community surrounding the University of Northern Iowa. The area's municipal bands would be able to easily intertwine campus life with their

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[63] Frank DellaPenna, interview, October 23, 2023.

[64] Stacey Maifeld, "Model Will Allow Iowa State's Iconic Campanile and Carillon to Travel beyond Campus."

[65] Luc Rombouts, "Carillon."

[66] Bells 2 Go, "The Only Touring Carillon in North America!!."

[67] Luc Rombouts, *Singing Bronze: A History of Carillon Music*, 246.

performances now that the instrument is on wheels.[68] The current carillon atop the University of Northern Iowa's campanile allows for too many musical risks in collaboration. Slight delays in sound and an inability for the carillonneur to see the conductor are just a few challenges that exist. However, with the mobile carillon, as Iowa State University discovered, the carillonneur can easily be incorporated into the ensemble and clearly view the conductor with creative positioning.[69] The collaborative opportunities of a mobile carillon are seemingly unlimited.

Conclusion

Frank DellaPenna was once quoted as saying "everywhere the bells go, magic happens." [70] Bells for centuries have had a way of bringing communities and people together whether that be in celebration or to remember the many memories created below. Mobile carillons, however, have the unique responsibility of not only bringing together in one community, but unifying many throughout their conception, construction, and eventual performance venue. Filled with pride, this mobile version would allow for everyone—regardless of physical or musical ability—to be exposed to the mysterious and technical art form that lies behind creating the delicate bell music. Listeners might gain a greater appreciation for the many students who have chosen to dedicate their time and talents to carry on the legacies and traditions surrounding such an iconic tower and experience. The diverse backgrounds of each student and performer allows for audiences to connect and see a bit of themselves in each performance. By humanizing the publicly beloved instrument, a mobile carillon is the perfect solution to bring a

[68] Frank DellaPenna, interview, October 23, 2023.
[69] Erin Rosacker, "Have Carillon, Will Travel."
[70] Greg Okuhara, "Pennsylvanian Brings Carillon to Texas Renaissance Festival."

piece of UNI on the road to unite past, present, and future students, staff, and enthusiasts of the ‘Panther spirit’ and its magic.

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