Technical Services Production Truck Proposal

This document is intended to supplement the information provided by the Arts Division regarding the instructional imperatives for replacing the current video production truck. As an institutional asset, the video production truck serves additional roles beyond providing a laboratory environment for hands on multi-camera video production exercises by our students.

As an institutional asset, the production vehicle greatly enhances our support for major events on campus and provides the opportunity for us to provide on the job vocational training for advanced students by working side by side with industry professionals on major productions both on and off campus.

This document examines the institutional history of the mobile video production truck, details the institutional functions served by the truck and discusses operational and budgetary requirements for moving forward.

Background

The current production truck is actually the second video production truck that Technical Services has constructed. The original truck was based on a GMC van chassis that was purchased used from Penske Truck Sales in 1988. This vehicle was constructed primarily to support the agreement between the College and the City of West Covina for cable television support. The vehicle and all of the equipment originally installed in the vehicle were funded through the agreement with West Covina and remained property of the City at the time the agreement was negotiated.

The original GMC van had four operating positions and supported a maximum of 4 cameras. The entire interior of the truck was designed and fabricated in house to save money. The truck was based entirely on analog composite video systems and used S-VHS tape as the primary recording system. This vehicle served as the primary production platform for the college for eleven years, from 1988 to 1999. This vehicle is still used as a support vehicle for productions; the interior of the vehicle was again modified in house to convert it into a field production office when the newer production truck was acquired.

During its years of service, the first production van was used extensively for both instructional classes and contract (Cable TV) events, and it was the basis for the beginning of our field production classes. This truck even made it up to Sacramento to cover the second inauguration of Governor Pete Wilson in 1995. It was during this time period that the first institutional use of the production van was made, when the van was used to record college commencement ceremonies as well as the re-opening and re-dedication of the Learning Technology Center.

In 2006, the van, along with all the equipment that had been purchased through the contract with the City of West Covina were signed over to the District as part of the termination of the

agreement to provide television production support for the City. The termination of the agreement was solely based on a lack of funding on the part of the City, and we continue to provide informal support for what is left of their community channel in the interest of good community relations.

The current production truck arrived on campus in November, 1998. The chassis was purchased with Instructional Equipment funds. The truck was purchased "rack ready", which means that the interior finishes were in place along with power distribution, a broadcast grade HVAC system, an on-board engine driven generator, "belly bay" storage compartments, interior and exterior lighting and equipment racks. The layout of the truck was designed by Technical Services with the input of broadcast consultants working on sports and entertainment trucks in Los Angeles. The original cost of the truck, purchased at the tail end of the fiscal 97-98 budget year, was \$162,890.99. The following year, the chassis mounted generator was added to the order at an additional cost of \$14,200.00, bringing the total cost of the vehicle to \$177,090.99, all of which was covered through instructional equipment funds. The layout of the current production truck supports a maximum of 8 operational positions and 6 cameras.

The "new" production truck was originally equipped with the old analog equipment that had been installed in the old van, along with a limited selection of new analog equipment purchased with funds generated by our service agreements with the City of West Covina and other agencies.

At the time that we were constructing the technical systems in the truck there limited funds for new equipment, however the work was done with the acknowledgement that the broadcast industry as a whole was rapidly migrating to a digital work flow (albeit in standard definition, given the state of technology in 1999). The Serial Digital Interface, or SDI, was rapidly becoming the industry standard and was greatly superior to the analog composite video standard in terms of video noise, color rendition and the lack of signal degradation in the recording process. It was during this time that we determined that there is a great deal of utility and value to be delivered by staying slightly behind "state of the art" in the broadcast industry, as we were able to purchase a good deal of inexpensive analog equipment that was still quite serviceable but was no longer the "industry standard". The current production truck was 100% analog composite video when it was first built.

As soon as the "new" truck became functional, we saw a large increase in production activity, including support for RTV remote production classes, outside contract events and, most importantly, support for institutional activities.

In 2002, we were approached by the faculty members in charge of the Cross Country Invitational about providing video support to feed content to a large $(12' \times 16')$ portable outdoor LED screen to enhance the participant experience at that event. This support has expanded over the years to provide complete coverage of the 2 day event on a larger screen with a concurrent webcast. In 2015, we will be providing our 14^{th} year of coverage, which now

includes the integration of social media, with live twitter feeds on the large screen, which is now a $17' \times 23'$ screen.

In 2004, we expanded our coverage of special events to include video support for the Mt. SAC Relays and the Foot Locker National Cross Country Championships in San Diego. In 2005, we made a major advance in the staging of our College Commencement ceremony by adding a large video screen behind the stage, this addition really helped keep people in their seats and not on the front rail of the stadium trying to see their graduates. In 2013, faced with rapidly expanding attendance at Commencement ceremonies, we totally overhauled our Commencement staging approach to allow the use of both sets of grandstands for guest seating. The use of a 22' x 30' truck mounted LED screen behind the stage makes this sort of arrangement practical and allows everyone to see the stage clearly. Commencement as it is currently staged really couldn't happen without video support, and this requires a truck. In 2014 we began a series of live webcasts to support the Instrumental Music program at the Performing Arts Center.

As support for these events expanded, we also had to expand the capabilities of the truck. Since the truck went into service, we have made the following expansions and enhancements:

- Replacement of the traditional front video monitor wall with a multi-viewer based system that allows for the creation of multiple, independently scaled and sized "virtual monitors" on large LED screens. This system will support HD video.
- Replacement of the original analog audio console with a Soundcraft Vi-1 console that includes surround sound capabilities.
- Replacement of the original analog intercom system with a digital 4-wire matrix intercom.
- The addition of a Rocknet digital audio distribution system which allows the truck to interface with equipment such as digital input and output boxes and announcer stations in the field, additional digital audio consoles when used for events like Commencement and with building infrastructure when the truck is used at the Performing Arts Center or the Design Technology Center.
- Replacement of the original analog Slo-Mo video system with a SDI-based standard definition digital Slo-Mo system.
- Replacement of the original analog character generator with a hybrid analog/digital/HD Deko character generator.
- Addition of extensive fiberoptic support for transporting video, data and audio information over extended distances using fiber.
- Replacement of the four original Sony analog production cameras with four new Sony standard definition digital cameras that are triax based. Triax allows all camera control signals, all camera video sends and returns, multiple audio sends and returns and camera power to be transported over a single cable for many thousands of feet.
- Addition of two more triax based cameras, bringing the number of available cameras to six.

- Addition of two long camera lenses to provide enhanced coverage of sports and large events.
- Replacement of the original analog video switcher with a hybrid system that supports both analog and digital inputs and outputs.
- Addition of a fiber optic network switch that allows the truck to integrate into the campus network at the stadium and at the Library.
- Addition of hardware to provide transport of VGA and DVI computer signals over fiber for enhanced sports production, allowing timing and results information to be integrated into the truck workflow.
- Addition of file based recording systems to provide end to end digital workflow.
- Addition of digital closed caption generator to provide live captioning of major events.
- Addition of hardware and software to encode and transmit live webcasts to the internet.
- Replacement of the original analog telephone system with a digital system that can interface to the campus phone system over the network.
- Addition of hardware and software to facilitate integration of Twitter feeds into the production workflow.
- Addition of an SDI router and patchbays to facilitate signal management of the new digital interfaces.
- Addition of SDI distribution amplifiers and a complete SDI engineering package.
- Replacement of all interior cabling to support higher definition digital video.
- Replacement of all audio patchbays.
- Replacement of all 6 camera tripods with heavy duty professional systems.

All of the expansion and modification of the truck has been designed, implemented and managed by in-house technicians. The funding for these upgrades has been a mixture of contract generated funds, funds from agreements with outside agencies, District operational funds and Instructional Equipment funds. A great deal of technical and financial creativity has been used by our staff and management to expand and maintain the capabilities of the production truck for the past 15 years.

The additions to the production environment continue to increase our ability to provide more sophisticated, industry standard tools for our students to use in production classes and for our paid employees to use in support of larger events. In recent years, the truck has been used to provide video coverage of speeches by President Bill Clinton, Bono, Bill Gates, John Cleese, Roy Disney, Gabby Giffords, Madelyn Albright and Janet Napolitano. For all of these events, we used a mixture of professional staff and current students as technicians, providing valuable vocational development for students in the program, affording students the opportunity to work on higher level productions while still attending Mt. SAC. Students that have participated in these productions have gone on to work for Rachel Ray, the TVG network, Disney, Bloomberg News and Dick Clark productions.

In 1999, at the same time that the second video truck was being constructed, the District performed a very substantial remodeling of the College Library, which also houses the Technical Services offices and the Television Studio. The studio and surrounding support spaces were totally redesigned and re-equipped with fairly modern systems.

The current studio control room has 10 operational positions and is equipped with 3 analog cameras and an analog switcher. The studio has one of the first digital audio consoles ever made, a Mackie D8B. Although there have been small improvements made to the studio over the years, it is still firmly rooted in the 1990s. Although the studio is still functional as a standard definition analog video production studio, teaching anything beyond rudimentary video production in the space is challenging, as virtually every piece of equipment is obsolete. Unlike the production truck, which has generated much of its upgrade funding through production projects, there has been very limited funding available for the studio environment.

The physical space that houses the TV studio is outstanding, and reflects design practices that are no longer cost effective. David Fincher liked the look of the studio so much that he used it as the control room set for his movie Zodiac in 2007, where it stood in for the 1970s vintage control room of the San Francisco television station KRON. With an update in equipment, this facility would be an outstanding teaching space for multi camera studio production.

Current Conditions

The current production truck is functional, but requires frequent life support. The production switcher, which is really the heart of the production environment, was made by EchoLab, a company that is no longer in business. As previously noted, this switcher is a hybrid unit that simultaneously supports analog video and standard definition digital video, both of which are still used in the current truck. There is literally nothing like this switcher for sale today, and when it inevitably fails, the truck will be out of service with no opportunity for repair, as there is no longer any support for this switcher. The implication of this situation is that we are one component failure away from not having a production truck available for Instructional and Institutional support.

The cameras that are used in the truck were purchased in 2004, and like anything else in the educational environment, they have been cared for as well as possible with student use. In the past academic year, we have had two camera failures during productions. The first failure was repaired by replacing a card in the camera, however when the second camera experienced a similar failure, there were no more cards available in the United States due to the obsolescence of the camera system. We are currently awaiting the return of the card from Sony Japan, where it is being (hopefully) repaired.

Pending equipment failures aside, the two biggest factors currently impacting the future of the truck are weight and the cliff effect of upgrading to current technology, which is high definition video with a different aspect ratio than currently supported on the truck.

The weight issue is a direct result of the expansion of the production capabilities of the truck. State and Federal law limits the weight that is allowed to be applied to the road by each axle of the truck. Since we only have a single axle at the rear, we are limited to 20,000 pounds of axle weight at the back of the truck. Even when the truck was first constructed with minimal equipment, we were near the weight limit at the back of the truck, and with the current equipment on board, the back axle weighs in at 23,000 pounds with no portable equipment on board. In order to avoid being further overweight, we must unload all the cable and portable equipment that is normally stored in the belly bays of the truck every time that the truck leaves the campus. We have worked diligently to shift weight forward in the truck towards the front axle, but we have moved everything that can be moved and we can't get the weight down any further. If we were to upgrade the current truck to high definition, the problem would be compounded as a given HD video component will usually weigh more than a similar analog component.

Aside from weight issues, the cliff effect has effectively stopped the upgrade path of the current truck. As we have purchased new systems, we have always tried to provide an upgrade path to high definition video where practical. The cliff occurs when everything else in the system has to upgrade to HD video at the same time in order for the truck to continue to function. In our case, all six cameras, the production switcher, the video router and all of the engineering equipment must be replaced at the same time in order to be able to produce video. This represents all of the expensive gear in the truck, and even if we had the weight capability, this would represent an investment of at least \$900,000, and for that investment we would still have a truck that couldn't legally leave campus and would only provide 8 teaching stations inside the truck.

As noted earlier, the Television Studio is functional, but firmly locked into the analog composite video format. Because the entire broadcast industry, down to the consumer level, has abandoned standard definition analog video, trying to teach anything other than the most mundane production techniques really isn't possible any more in this facility. The home video enthusiast making videos for YouTube has more production power with a consumer video camera (or smartphone) and some simple computer hardware and software has more production power than can be mustered in the studio. The television program has fully migrated to HD video for field production and editing in order to maintain relevance in their program while the multi-camera capabilities of the College have remained stuck in the standard definition world since the program started. Due to the lack of incremental upgrades to the studio infrastructure, the move to HD video in a stand-alone studio would cost much more than the truck upgrade, a budget of at least \$1,200,000 would be required.

External Conditions

In addition to the compelling need to bring our multi-camera production environment up to industry standards, there is another key factor in the decision making process, and that is the new stadium. From the beginning of the design process of the stadium, every effort has been

made to insure that the facility is "broadcast technology friendly". To that end, the stadium design includes an extensive broadcast infrastructure that insures that power, data, triax, fiber and audio connectivity is available via broadcast interface boxes at all practical broadcast locations. All of this connectivity terminates in a broadcast truck interface building located in the southwest corner of the truck parking area at the new stadium complex. This truck parking area has the space, connectivity and power required for a major live broadcast production. In addition to supporting outside broadcasts, this infrastructure was designed to support field production classes in the television program and to enhance the viewer experience at the new stadium.

As a supplement to the broadcast infrastructure, the new stadium will be equipped with a permanent LED video screen supporting HD video. This screen will be used in lieu of a traditional scoreboard, because with the appropriate software and hardware, a "virtual" scoreboard of any type and specification can be created. This is similar to the approach used by the University of Michigan at the Michigan Stadium, as well as numerous other colleges and universities across the country. A major component of this "virtual scoreboard" will be a high definition video window that will provide a live feed of the game in progress.

To this point, the plan has been to provide this feed from the College video truck. Producing this live feed of all home football games and other major events as part of a remote production class will provide hands on experience for our TV students and will greatly enhance the fan experience as well, hopefully driving increased attendance at our games. Having this live feed available will also allow the college to provide a live webcast of all home football games, allowing fans from around the world to watch Mountie Football.

Because of the enhanced broadcast infrastructure of the new stadium, producing coverage of major events at the stadium will be greatly simplified and will substantially eliminate the considerable effort required to bring in camera, audio and video cabling for every event. With the stadium infrastructure in place, all that is required is to have the vehicle park at the truck interface and plug in with short jumpers. All the needed connectivity is provided to every camera and announce location, reducing setup time to a minimum and providing our students and staff with an optimal hands on experience by eliminating the repetitive effort of pulling in and removing long cable runs. By making the setup less tedious, we should be able to maintain the interest of more students, produce more and better programming and increase retention in the broadcast program.

Planning for the HD Transition

As early as 2010, Technical Services and the Television program began a series of discussions about the need to move to HD video production. Since both the Television Studio and the production truck required upgrades, preliminary budget evaluations were aimed at determining the cost to upgrade both facilities.

Due to the need to replace virtually all of the equipment in the studio and most of the expensive equipment in the truck, we determined that it would not be financially realistic to replace both facilities simultaneously. Since many productions in Los Angeles depend on the use of a production truck as a control room, we determined that a new production vehicle could (at least temporarily) do double duty as the control room for the studio, maximizing our investment in expensive production equipment and reducing the time that this equipment sits idle.

Once an agreement was reached on the concept of a double duty production vehicle, some initial planning and budget research was conducted on the cost of a new production vehicle. Chassis costs were determined in consultation with Gerling, Incorporated, one of the leading manufacturers of remote production systems in the United States. Our initial focus was on another unitized vehicle that incorporated the engine and cab as part of the one piece chassis. In order to accommodate the required number of operating positions, the vehicle would have to follow the current industry standard of expanding when parked. This allows the vehicle to extend past the legal maximum of 8 feet in width when parked, typically expanding to an operational width of around 13 feet. In this expanded format, the production unit could support between 14 and 20 operational positions.

Starting in 2011, the budget for a replacement production truck was incorporated into the Technical Services planning process. This plan continued forward through 2015 due to a variety of economic issues. At the 2015 National Association of Broadcasters convention, our staff had a series of meetings with Gerling engineers, and one of the outcomes of these meetings was a change in direction for the design of the vehicle.

The key change to this plan was a change in design approach from a self-contained 3 axle expandable production truck to an expandable production trailer with a separate tractor. Given that this system has to serve as both the control room for the studio and the anchor of a mobile production environment, it seemed prudent to separate the propulsion of the equipment from the production environment, making it possible to service the mechanical parts of the system without taking the whole system out of service. Moving to a trailer environment also provides a quantum leap in storage space. Since there is no driveshaft on a trailer, the belly bay storage space can span the entire width of the trailer. Storage has always been a real issue with our present truck, as we can't really fit all the required equipment into the belly bays of the truck, forcing us to load and unload equipment into the production space on every setup. Another advantage is that the overall length of the truck footprint can be reduced by detaching the tractor, making it easier to fit the system into tight spaces like the library dock. Finally, the classic tractor/trailer rig is the standard in the industry for sports and entertainment production, having a version of this standard will provide greater instructional opportunities for students interested in the technical aspects of broadcast production.

By incorporating a flexible configuration space at the back of the trailer and equipping this space with a lift gate, we will be able to provide a unique feature that is virtually unknown in the remote production world, wheelchair access to the control facility. Although a number of

current production trucks from NEP and Game Creek feature this type of flexible space for multi-purpose use, none of these trucks combine this type of space with a lift gate and access from the multi-use space to the expanded portion of the production control room of the vehicle. This will provide the College with a very unique production environment which will allow us to better serve students with disabilities.

The only disadvantage to this tractor/trailer approach is that we will no longer have a chassis mounted motor driven generator available on board the truck as we do with our current vehicle. Although the concept of using the truck motor to drive a generator when the truck is parked seemed like a great idea in 1999, in practical use it has been less useful. The generator adds considerable weight to the vehicle and consumes valuable storage space. In use, having the generator and motor attached to the same chassis as the production space causes serious noise and vibration issues inside the control room, especially for the audio engineer. Because of this issue, we have used the chassis mounted generator less than ten times in the 15 year life of the old truck, usually as a backup when normal power unexpectedly fails.

The tractor/trailer approach would allow us to mount a larger generator on the tractor, in addition to isolating the power source from the production environment; this method would also provide the College with an additional portable high capacity generator for disaster recovery. Although the tractor chassis can be purchased with an allowance for mounting this type of generator, the generator itself is not included in this budget.

Proposed Truck Budget – August 2015

As part of the Technical Services new resource allocation requests that were submitted in July, 2015, we proposed a 4 phase budget for the new production trailer. The phased approach would allow us to build the truck incrementally as funding becomes available.

The proposed phases were:

Phase One – \$800,000 – Purchase expandable production trailer and fund infrastructure wiring inside the trailer

Phase Two - \$900,000 – Purchase production hardware for new trailer

Phase Three - \$180,000 – Infrastructure and hardware to integrate the production studio inside of Building 6 to the trailer, producing ah HD studio with the trailer serving as the control room.

Phase Four - \$70,000 – Purchase a day cab semi tractor to tow the trailer.

Specifics are difficult during this budget development process. Broadcast standards are changing every month. 4K and 8K video production elements (essentially 4 and 8 times the resolution of current HD video) are being incorporated into the broadcast workflow. Unlike the previous manufacturer driven 3D fad, these increases in resolution represent a sustainable increase in the quality of production. IP based video production is becoming more of a reality every day. One of our staff members recently left the college to project manage the installation

of an entirely IP based studio in Chicago. The good news is that these movements further out on the technology curve will bring down the cost of HD video production equipment, and given the current industry investment in HD systems, HD production will certainly remain relevant for the next 10 years. We believe that a very capable production unit can be constructed with this budget, and it will be a facility that the college will be proud of.

In <u>very rough</u> figures, the entire project, with space for a minimum of 16 student operating positions, would pencil out like this:

\$750,000	Expandable production trailer, rack ready with electrical distribution, power
	regulation, interior and exterior lighting, interior finishes and HVAC system with
	hot gas bypass. (Phase One)
\$50,000	Infrastructure wiring and patch bays. (Phase One)
\$480,000	6 HD Camera chains with digital triax backs, CCUs, RCUs, camera bodies, HD
	viewfinders and covers @ \$80,000 each. (Phase Two)
\$75,000	Sony 2.5 ME 36 input HD Switcher. (Phase Two)
\$50,000	Additional HD Monitors and miscellaneous support equipment (Phase Two)
\$120,000	64 x 64 Evertz HD-SDI router with additional integrated multiviewers, engineering
	package. (Phase Two)
\$45,000	360 Systems MAXX 2400 HD 4 channel video server (2 records, 4 playbacks).
	(Phase Two)
\$36,000	4 AJA KiPro HD Recorders with drives (Phase Two)
\$40,000	Riedel Artist 64 Intercom mainframe and additional key panels (Phase Two) The
	existing 32 channel mainframe would be relocated to the TV studio with a
	fiberoptic tie between the 2 frames.
\$54,000	Installation and integration supplies, furniture and small equipment for the trailer.
	(Phase Two)
\$40,000	Building wiring and infrastructure to provide a truck interface panel to integrate
	the TV Production Studio with the trailer. (Phase Three)
\$140,000	Additional hardware and equipment for the TV Studio including studio pedestals,
	camera build-up kits, studio viewfinders, teleprompters and additional Riedel
	keypanels for the studio and Master Control. (Phase Three)
\$70,000	Purchase a day cab three axle tractor to pull the production trailer. (Phase Four)

This comes out to the budgeted \$1,950,000 for the entire project.

In this budget scenario, we would re-use our existing multiviewer monitors, the Soundcraft audio console, the HD Closed Caption encoder/decoder, some of the Evertz frames and the HD Deko character generator as well as the existing Ki-Pro recorder, the fiber data gear, the six new tripods and the Riedel intercom panels.

Phases one and two of this project are tightly linked, with phase two commencing as soon as the mobile unit is received. Should portions of this project need to be delayed for a significant

period of time due to budget considerations, phases three and four provide the opportunity for this.

During the early implementation of the project, we will rent a day cab tractor to move the trailer when needed. Eventually, we will need to purchase a tractor and insure that some staff member on campus possesses the appropriate Class A driver's license. A similar license would be required for a unitized truck with 3 axles and air brakes, so the move to a tractor/trailer arrangement does not impose additional licensing requirements.

The old truck could be turned into a mobile emergency operations center for the college, this is an excellent fit for this type of service as it can be fully self-contained with the generator on board.

Mobile Unit Operational Parameters

Depending on a single control room for two production facilities will obviously increase the scheduling complexities of a shared resource such as this. We have already reviewed the known production schedule for recurring events that require the use of the truck for remote production requirements. Since these recurring events are scheduled well in advance, allowances can be made in the instructional program to provide availability for the mobile unit. Some of these recurring events such as home football games will be incorporated into the remote production classes to provide additional instructional activities for the students.

To help mitigate these scheduling issues, the Technical Services department is currently designing a mobile "fly-pack" control facility that will allow smaller multi-camera productions to operate independently of the mobile unit. Although this system was originally funded to support overflow video streaming and live captioning for campus events, it can also be made available for classroom use when the mobile unit is not available. In addition to providing continuity of instruction, the fly-pack system will provide student exposure to another type of production environment. Fly-packs are frequently used for webcasts, industrial and conference video presentations and live event video reinforcement.

A further benefit to the fly-pack concept is that the system will incorporate several remote controlled robotic cameras, or robo-cams. These cameras are becoming very popular in live sports and entertainment broadcasts and are used extensively for webcasting. By providing access to robo-cam operation, the fly-pack will provide additional vocational training opportunities and will further enhance the marketability of students graduating from our program.

Modifications to the studio control room will be made with the future in mind, as substantial growth in the instructional program could eventually lead to the need for a stand alone studio control room again, and nothing will be done to the facility to preclude future conversions of the control facility.

Beyond the regular scheduled yearly events that use the mobile unit for support, new requests for the use of the vehicle will be processed using the same priorities that govern the outside use of all other campus facilities. These long established priorities, in priority order, are:

- 1. Use of the facility for television production by the RTV program.
- 2. Use of the facility for other instructional production.
- 3. Use of the facility for institutional support.
- 4. Use of the facility for outside groups.

As with other facilities on campus, the use of the facility for outside production would always be booked in consultation with the Division Office.

Technical Services staffing for the operational support of the new mobile unit is adequate. We have a supervisor and a higher level classified employee available for on-going operational support. Instructional support is addressed in the Arts Division document.

As we did with the current production truck, we would hire a broadcast consultant to assist with the design and purchase process, this expense has been factored into the cost of the chassis. This process will require at least two trips to the manufacturing facility during the design and construction process.

Due to current staff shortages, the design and integration of the infrastructure and equipment in the mobile unit will likely require some additional short term assistance. Expanding the timeline for the integration work would assist us in balancing out staff loads. A 6 to 8 month period for acquisition and installation of internal hardware would be reasonable. Following the completion of the mobile unit, and additional 3 to 4 months would be required to integrate the studio production environment into the new mobile unit.

Depending on the final design of the trailer, some regrading of the Library loading dock may be required in order to facilitate the parking of the trailer.

Since the majority of the equipment in the mobile unit and the chassis itself will be new, we don't anticipate any immediate increases in the maintenance budget for the vehicle.

We already have a separate fund established to manage the expense and income derived from the rental of the mobile unit. In addition to managing the budget for internal uses such as the Mt. SAC Relays and the Cross Country Invitational, this fund is used when the existing truck is rented for events such as the Pomona College Commencement or one of the Foot Locker Cross Country events. This fund is structured like the Contract Rental Fund in that income must cover expense. Funds remaining after event costs are paid are used to upgrade equipment in the mobile unit. As noted previously, many of the upgrades to the existing truck have been made with funds derived from outside production agreements. Although it is appealing to consider the expansion of the rental portion of this operation to generate additional support funds, this expansion must be approached very carefully to avoid encroaching on I.R.S. Unrelated Taxable Business Income (UBIT) regulations. Since the majority of our outside production projects incorporate vocational elements for our students, and since all of the income is re-invested in an educational facility, it would appear that we are operating within the bounds of the tax code, however consultation with the appropriate legal counsel is called for before any additional expansion is undertaken.

Conclusion

In separate documents, the Arts Division has presented a strong case for evolving our multicamera instructional production capabilities to high definition format. This document has made the case for the multi-camera environment to be mobile, and viewed as an institutional as well as an instructional asset. Both uses must be evaluated in the decision to fund such an ambitious undertaking, as neither use by itself could justify the expense of constructing this system.

The College has a long history of producing exemplary events, both the Mt. SAC Relays and the Cross Country Invitational have brought national recognition to the College, and the availability of a mobile video unit for these events has substantially increased the public perception of these events. Our current Commencement productions really couldn't exist without the video production enabling the audience to see the proceedings. Our ability to provide live on-screen captions during the ceremony increases the accessibility of these proceedings for our hearing impaired guests. All of these functions depend on a functional mobile unit to produce the needed video, and we are one component failure away from losing that capability.

The new college stadium will incorporate an HD video screen as part of the facility infrastructure. This screen, when coupled with a new mobile unit, will provide an outstanding opportunity for our production classes to showcase their work in the form of live video coverage of sporting events in the stadium. Without an HD mobile unit, this opportunity will be lost.

The College has a unique opportunity to establish another signature line of instruction with this investment. The mobile unit itself will be unique to California Community Colleges and designed with best practices derived from years of experience in the broadcast industry. The hybrid nature of the operation will continue to provide our students the opportunity to work with industry professionals in the production of programming for public consumption.

This investment will allow us to advance the instructional program at the College, allow us to continue to provide on-going quality support of major events on campus and give the College a significant institutional asset that we can be proud of.