A STRATEGY TO INTRODUCE THE POLICE USE OF VISUAL SURVEILLANCE TECHNOLOGY IN PUBLIC PLACES

by

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This Command College Independent Study Project is a FUTURES study of a particular emerging issue in law enforcement. Its purpose is NOT to predict the future, but rather to project a number of possisble scenarios for strategic planning consideration.

Defining the future differs from analyzing the past because the future has not yet happened. In this project, useful alternatives have been formulated systematically so that the planner can respond to a range of possible future environments.

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A Strategy to Introduce the Police Use of Visual Surveillance Technology in Public Places

The issue of police use of Visual Surveillance Technology (VST) in public places was placed in the context of a mid-sized police agency in a Command College study. VST as defined in the study is the use of visual imaging systems such as closed circuit or microwave television. The mid-sized police agency used as the subject agency was the Bakersfield Police Department, Bakersfield California. The city has a population of 182,000 and is served by 249 sworn officers.

The focal points of this article deal with some of the significant findings of the Command College study relative to strategy development. A future scenario will be described; the department's mission statement will be modified to include VST; alternative strategies to implement VST will be developed; and a preferred strategy will be selected and discussed. Additionally, the experiences of two agencies currently utilizing VST will be examined.

Aside from the fact that VST is beginning to emerge in other cities, why is it important to study such an issue? A literature scan revealed several concerns that are providing impetus to use VST. One is the fear citizens have regarding crime, terrorism, and bad cops. The recent riots in Los Angeles given 24 hour news coverage conveyed subtle and not so subtle messages that the police were not able to protect property or life.[1] The Iraqi war renewed citizens fear of terrorist acts when the State Department issued terrorism warnings.[2] California has also had a number of notorious bad cop stories, including a black activist having his

head smashed through a plate glass window by two southern California officers.[3] VST offers a method of increasing police service and presence while at the same time, monitoring the actions of the police.

Secondly, there is a general trend of increased urbanization and decreased government budgets. The urban growth comes from both increased population and a demographic shift from rural to urban. As urban problems increase they are mismatched with citys' revenues and tax base. Two-thirds of state legislators report their budgets are in trouble, with almost 60% girding for possible tax hikes. This dilemma for many will mean reduced services.[4] VST is seen by some as a strategy to mitigate deficient manpower levels through police video patrols.

Thirdly, video technology has developed a momentum of familiarity and acceptance because of its widespread use in government and private industry. The Devonshire Division of the Los Angeles Police Department has even gone so far as to equip citizens with a radio, binoculars, and a video camera to aid in their fight against crime.[5]

The following **future scenario** was developed from futures forecasts made by a panel of professionals. The scenario is a non-fictional narrative written by a historian looking back over events and trends as if they had actually occurred. Three newspaper type headlines are provided to orient the reader, followed by a narrative description.

Measure 42: Public Safety Assessment District, Passes, The Bakersfield Californian, November 3, 1997.

USC Study Gives California Law Enforcement High Citizen Approval Rating, Newsweek, September 4, 2002.

Cal Chiefs Oppose Mandated Use of VST, Sacramento Bee, November 10, 2002.

Bakersfield Police Chief Ray Jones addressed the 2002 Cal Chiefs' Conference held in Monterey, California on the topic of "Police Use of Visual Surveillance Technology." The following are paraphrased excerpts of that talk about the Bakersfield experience over the last 10 years.

Prior to Bakersfield's leap into the world of visual surveillance technology, two significant events had to occur. The first was the approval of a local measure to tax specifically for law enforcement. That event secured "adequate" funding to maintain the same level of service with commensurate personnel. It also calmed the officer association about impending layoffs. The second event was a change in staff's position that VST was not contradictory to the community oriented policing style we had developed.

VST was initially promoted as a mitigation technique for traffic congestion, enhanced security for our major utility service sites, and as a security measure for downtown shoppers.

VST has not been readily accepted by all. Paul Bell, a local anti-government zealot who has been fighting the city over licensing regulations, filed a lawsuit alleging harassment of his downtown coffee shop. The all-nude Deja Vu dance club has also filed suit, alleging cameras were positioned to videotape their customers, causing a 50% reduction in business. The local media

has played up the "Big Brother" fear even though they are well aware that both claims were unfounded.

Even though the media and a few anti-government zealots protested, the community was not opposed to the initial site selections or intended use. Congested intersections, downtown locations, and utility sites were an "easy sell." Bakersfield, as well as other California cities, is enjoying the highest citizen approval ratings in over 10 years. The "Big Brother" concern that was anticipated for VST never developed due to our improved image.

Community input has been a significant factor in addressing the VST criteria issues of site selection and enforcement policies. Some of the resources that have nearly tripled in the last 10 years to combat drug abuse have been used to install new VST equipment in drug "hot spots."

The rather aggressive posture of the Bakersfield Police Department and other agencies in the state to implement VST at Senior Citizen Centers and locations of high juvenile crime, were major factors in the failure of a Senate bill to mandate VST. Local control of VST is critical both in terms of funding and setting priorities for its use.

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With the futures scenario in mind, the agency Mission Statement was modified to include VST. The modification reads:

> The Bakersfield Police Department believes that the use of visual surveillance technology is a significant law enforcement tool that will deter crime, interdict crime, and enhance manned patrols.

The Bakersfield Police Department is committed to increasing community awareness of police operations, including visual surveillance technology so that the community can better understand the capabilities and limitations of the department.

To accomplish the mission statement a panel of professionals developed the following alternative strategies.

1. The police department introduces VST to Bakersfield in a small pilot program at a city owned downtown parking structure. This site would generate little controversy due to recent demands for increased security after a rape attempt. The parking structure is patronized by many working females whose companies have been pressuring the police department for more security.

2. Allow private security companies to bid for a VST contract with the city. The private security companies could man the monitors much the way they handle alarms. The police department would be called if criminal activity was viewed. This would be a contracted service the city would pay for.

3. Require by city regulation that developers install fiber optic cable hook-ups in all new commercial and residential developments. If raw land is being developed, require developers to install fiber optic

cable in roadways. This allows the most costly aspect of VST to be borne by developers.

4. Propose implementation in the most crime and violence ridden neighborhood in the city. Implementation by the greatest need; a neighborhood plagued by drug and gang crimes, and a neighborhood that generates the most complaints by citizens against officers.

5. Utilize a marketing firm to develop a media blitz aimed at garnering community support for a new law enforcement tool. The firm would also be responsible for publicly communicating the capabilities and limitations of VST.

6. Organize a government/citizen task force responsible for identifying key players, affording public input, vendor selection, policy and procedure oversight.

7. Develop VST as a revenue generating resource. Allow the police department to sell a combined alarm/VST service to businesses for a profit.

8. Negotiate with insurance companies to provide reduced rates to homeowners and businesses serviced by VST. The reduced rates could be transferred to the property owners as a fee for the service. The property owner and insurance company would be bearing the cost of the service.

9. Develop a new civilian department to operate VST. That public agency would report criminal activity to the police department for response. The agency would be overseen by a citizen VST board.

The author of each strategy was asked to discuss the merits of their strategy in terms of what the likely support and opposition would be and how feasible they believed the policy was. After the discussion the panel members were given a rating form on which they provided a numerical rating of the feasibility and desirability of each of the candidate strategies. The results of that rating were:

Policy Alternatives	Rank	Feasibility	Desirability	Total*
Pilot Program	2	19	20	39
Private Security VST	8	6	2	8
Developers to Pay for VST	6	7	12	19
VST in High Crime Neighborhood	4	7	17	24
Marketing Firm to Introduce VST	5	12	8	20
Government/Citizen Task Force	1	19	21	40
VST to Compete with Private Alarm Companies	7	2	15	17
Negotiate with Insurance Company	3	15	20	35
Create New Civilian VST Agency	9	6	0	6

*Total Possible Points = 42

The top ranked policies were:

1. Organize a government/citizen task force responsible for identifying key players, affording public input, vendor selection, policy and procedure oversight.

2. The police department introduces VST to Bakersfield in a small pilot program at city owned downtown parking structure.

3. Negotiate with insurance companies to provide reduced rates to homeowners and businesses serviced by VST.

In further discussion of the top 3 ranked policies, panel members felt that policy 3 (negotiate with insurance companies) could easily and appropriately be included within the task force responsibilities. Therefore, the selected strategies are organizing a government/citizen task force and the police department introducing a small pilot program. Panel members felt these two policies complimented one another and offered the most realistic approach to introducing VST to Bakersfield.

PILOT PROGRAM

The pilot program strategy would be a very feasible start in the use of VST. The pilot site is a multi-story downtown parking structure owned by the city. It is primarily used by downtown office and business workers, mostly female. The area is within two blocks of a Greyhound bus depot and usually has a number of undesirable transient types loitering in the area. There have been some thefts from vehicles, a few assaults, and most recently, an attempt rape. The site is within 4 blocks of the police department which would minimize costs of fiber optic cable. Downtown

businesses and the media have called on the police department to provide more security.

The different stakeholders, particularly the political ones, could easily overcome any criticism of "Big Brotherism" considering the reasons for installing the system, protecting females from attack.

The scale of this pilot program would be so small that existing staff could be used to monitor the site.

Disadvantages of a pilot program with such a limited scope includes the fact that it will be difficult to measure the impact of the system since the criminal activity is so infrequent at the site. It is a program that adds additional workload and responsibility without additional staffing.

The primary law enforcement stakeholders will be supportive of this type pilot program. The stakeholders that might oppose such a system in their neighborhood would not likely oppose a site designed to protect women.

GOVERNMENT/CITIZEN TASK FORCE

Openness with the community regarding a project such as VST will be critical in maintaining trust and reducing fear. The police department, while being well supported by the community, lacks in its image of being open and accessible. The use of inter-department representatives (City Attorney, Risk Manager, Communications Director) with 7 citizens appointed by their ward councilperson, along with the police department VST Project Director, would be a major step in assuring the major stakeholders supporting the mission of implementing VST in Bakersfield.

Other advantages include; the program is directly controlled by the agency that will utilize the information; training of the program staff would be consistent with police standards; citizens have a major role in adopting site and use policies; political representation is assured; and standards adopted by such a task force would have "community" status.

Some of the disadvantages of this strategy include: another level of bureaucracy is created when citizens are trying to reduce government; funding for the program is not secured which would probably mean using asset forfeiture funds; political agendas could be brought to the table when establishing policies due to the citizen appointment process; "Big Brotherism" may still be a factor proffered by the media and defense attorneys.

Given the very sensitive political nature and trust of government factors in implementing VST in the City of Bakersfield the government/citizen task force concept is the best strategy for developing more than a pilot program.

PREFERRED STRATEGY

The preferred strategies consist of first implementing a pilot program that will introduce VST to Bakersfield in a very positive and citizen safety conscious way. Then, to further expand the use of VST to need-driven sites, a government/citizen task force would be formed. The task force would be charged with educating the public about the capabilities and limitations of the system. They would also be responsible for assuring the public that their constitutional rights are being protected not invaded. This combination strategy accommodates the widest variety of

stakeholders while generating the least amount of controversy. The police department maintains control of the information produced by the program for efficient law enforcement tactics, and the community has an authoritative voice in the policies and procedures of the program.

During the Command College study, two agencies currently using VST were visited. The author's description of their experience may provide some additional insight into this issue.

Newark, New Jersey Experience

Newark is a traditional east coast city with a strong mayor form of municipal government. It is urban with approximately 300,000 people living in 24.1 square miles. The city's harbor frontage is the nation's largest container shipping center. Downtown has a number of large financial institutions and boasts of a prospering section known as "Portuguese Town." The city's racial make-up is approximately 65% black, 25% hispanic, 7% white, and 3% other.

Newark is also a city that is decaying. Large factories have steadily moved their businesses to other locations, resulting in one of the higher unemployment rates in the country. Housing projects are in decay or have been completely abandoned because they are no longer inhabitable. Newark is a city that depends on the federal government for roughly 50% of their municipal budget. Officials in the Mayor's office see little hope of that changing in the near future.

Crime is a primary issue for Mayor Sharpe James and Police Director William Celester. The downtown area of Newark is where

most of its residents do their shopping, and few feel safe because of the number of thefts and robberies occurring.

In an effort to maintain control of their streets and win the war against crime, Newark instituted "Video Patrol." "Video Patrol" incorporates closed circuit television surveillance to monitor 2 1/2 miles of the downtown business district. From a monitoring station (kiosk) at the intersection of the city's two main downtown streets, a police officer can monitor 6 Panasonic CCTV cameras strategically placed in the downtown area. "Everyone is facing the same problems: decreasing budgets and workforces, and the responsibility to do more," said Newark Mayor Sharpe James.[6] "This system takes one officer and allows him to do more, see more and be in a position to coordinate more. We are getting more for less."[7] The VST system was funded by a $101,000 federal grant, and was the brainchild of former Newark Chief George Dicksheid, who came up with idea after a distressing downtown robbery.

In its first two months of operation, Police Director Celester attributed 12 arrests directly to the system, including two car thieves arrested during the first night the system was in place. The Director does not play down the "Big Brother" aspect, indicating he wants criminals to know they are being watched and taped. In the long run, city officials believe the system will increase the sense of security in the downtown area which will eventually generate more revenue for the city.

Newark Police Lieutenant Frank Leonardas credits the success of the VST to two things. First, Haynes Security Inc., the contractor and service provider, has made sure that every aspect of the system meets the police department's expectations. Secondly,

Lieutenant Leonardas states the system is only as good as the operator. Leonardas credits Officer Lenny Plinio as being one of the best kiosk operators.

When asked about the negatives of the system, Leonardas said there were really only two. First, the monitors in the kiosk were black and white, which hinders the offering of a clothing description when the kiosk officer observes a crime. Second, is finding enough operators like Lenny Plinio that desire the kiosk duty.

Leonardas related that calls for service have declined only slightly in the downtown area after installation of the system, however, the robberies from persons such as "chain snatches" have declined significantly.

Director Celester states that he has had a number of requests to put the system in residential neighborhoods and is hindered only by the lack of funds.

Pinole, California Experience

Pinole is a small city of 18,000 people located 20 minutes north of San Francisco. It is a suburban community of 5.5 square miles that is primarily residential. The racial make-up is 77% white, 13% asian, 7% black, and 3% hispanic. There are virtually no blighted areas as contrasted to Newark.

Pinole is not crime free, but, it does enjoy the absence of the everyday "big city" crime. The city is policed by 22 sworn officers including Chief of Police Ted Barnes. The city has experienced growth, including some major anchor stores locating in an east side shopping center. The California budget crunch has

effected Pinole just as it has other cities. With increased calls for police service, a constrained budget, and no additional manpower, Chief Barnes is pioneering a new approach to police service.

Chief Barnes's vision for the funding and use of VST is multi-faceted. The first project implemented was the installation of VST at the Senior Center in downtown Pinole with 5 fixed position and 2 pan/tilt/zoom cameras. The cameras are integrated with the buildings alarm system and are connected via fiber optic cable to the police department monitoring equipment located in the communications center. The $305,000 cost of the project was paid for with re-development monies. The second phase of project, connecting the major shopping center to the system, will cost $370,000 of developer monies.

The VST vision of Chief Barnes for Pinole is a complete system of fiber optic connected cameras placed in strategic locations of the city. The fiber optic cable will also carry phone and computer lines to critical government and city locations. The integrated system will not only allow police cameras to search for suspects, but will also become an essential component of their disaster plan.

Chief Barnes also has taken aim at the lucrative private security alarm business. He believes that alarms integrated with police department cameras could generate revenue in the "business profit" sense for his city.

The Chief credits the existing system with enough increased efficiency to forestall any immediate need for additional manpower. He is also convinced that with a complete and integrated VST

system, that no additional manpower would be needed in the foreseeable future.

The Newark and Pinole experiences had different motivational factors. Newark was a city plagued by frequent and serious crimes in their downtown. VST for Newark was a response to crime. Pinole's VST response was also to deter and interdict crime, and more. The fiber optic cable connecting police cameras are also intended to integrate municipal computers and phone lines. Connections are planned for the hospital, schools, and other important locations in the event of a disaster such as an earthquake. Chief Barnes commented that the existing phone lines were useless to emergency services and government during the last San Francisco earthquake simply because they were inundated with calls. Pinole is different as well because of their intent to compete with the private sector for alarm business dollars.

Both Pinole and Newark shared the common support of their city councils, mayor/city manager, officer associations, and general citizenry. In both cities the police department had exclusive control over the systems. Citizen input was present but was not controlling nor conflicting.

The strategy developed in the Command College study on this issue of the police using Visual Surveillance Technology to police public locations in the future was driven by a perception that the public is mistrustful of the police. The formation of a government/citizen task force was, in large part, a response to that perception. Additionally, panel members developing the data

and findings were not convinced citizens were ready to accept this concept from the technology standpoint. The two cities currently using VST have a clear absence of this anticipated "citizen concern." The situation in these two cities, Newark, and Pinole, do not invalidate the data generated for the Bakersfield area, however, it would suggest further study concerning the confidence and trust level citizens have in their respective police agencies. It would also suggest further study in terms of the acceptance level of technology policing.

Three sub-issues that were considered in the generation of the strategic plan were:

A. How will agencies manage the "Big Brother" concern of citizens?

Key government officials such as the Chief of Police, will be critical in reducing the citizen perception of "Big Brotherism." These key officials would use techniques such as community meetings and gathering feedback information to reduce this fear. The citizen/law enforcement task force would also be charged with the task of reducing this perception. The non-secretive, open format of the task force should assist in this endeavor.

B. How will agencies manage the criteria issues raised, regarding such things as the acceptable level of surveillance and site selection?

In the initial development and implementation of VST in a pilot setting, and later some key municipal locations, the citizen/law enforcement task force would be utilized for these decisions. Because it would be a new law enforcement tactic for

Bakersfield, citizen "buy in" would be critical from both a practical and political standpoint. If, as in the normative scenario, VST proves its usefulness and acceptability, it would be expanded as a profit making service, offered by the police agency to both the business and residential markets. The criteria issues of site selection and levels of service then would be handled more in a "business" format.

C. How will agencies manage the enforcement issues raised by use of this technology?

The enforcement issues would be dealt with in a similar manner as the logistical issues discussed above. The task force would be used for citizen input, with the agency maintaining control of the day to day operations.

If VST proves its usefulness and acceptability as described in the desired future scenario, policing by most agencies would be altered dramatically. Flooding a section of the city with police officers to search for a robbery suspect and vehicle will no longer be necessary with video cameras positioned in strategic locations to do the search in a fraction of the time, by one operator. The random patrol now done by manned police units could be reduced or eliminated. Decision making personnel could have immediate visual images of an erupting scene, such as the Los Angeles intersection where the "Rodney King" riot began for prompt action. Comprehensive video policing of a jurisdiction could dramatically reduce the need for additional police personnel. The applications

of VST in the future could have the same revolutionizing effect that the introduction of two way radios had in the 40's.

Given the current trends and events concerning crime, government, and police, the consideration of Visual Surveillance Technology appears to be a novel approach to a variety of policing problems. The strategy presented in this paper was one approach towards an implementation. Until such time as crime is no longer a major concern of our communities, the necessary pursuit of new law enforcement tactics will continue.

ENDNOTES

1. Sandra Sanchez, "FBI To Investigate Videotaped L.A. Beating," U.S.A. Today, March 1, 1989, p. 1.

2. Marvin J. Cetron, "The Growing Threat of Terrorism," The Futurist, vol. 23/4, July-August 1989, p. 20-24.

3. Haya El Nasser, "Home Videos Turning State's Evidence on Bad Cops," U.S.A. Today, March 1989, p. 1.

4. "Two-Thirds of States in Trouble," U.S.A., February 4, 1991.

5. Jim Herron Zamora, "LAPD Enlists Civilians For Stakeout, Videotape Duty," Los Angeles Times, March 7, 1992, p. A1.

6. "Video on Patrol," Panasonic Application Report, p. 2.

7. Ibid.

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EPIGRAPH

"I do not believe that the kind of society I describe [in 1984] **WILL** arrive, but I believe...that something resembling it **COULD** arrive."

-- George Orwell 1949

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INTRODUCTION

The general concern of this study is the future use of visual surveillance technology (VST) to police public locations. The study will be directed towards the year 2002, ten years from now. Visual surveillance technology is defined as the use of visual imaging systems such as closed circuit television or microwave television. Both use fixed position cameras to transmit video images of a public location. This is not a study of the sophistication level of the technology (although it is considerable), rather a look at whether or not current events and trends are shaping a future that will include public locations being "camera" patrolled by the police.

From a historical perspective the use of technological tools has been steadily increasing in the law enforcement arena. Recent entries include portable breath testers, mechanical alcohol and drug sniffers, photo radar, and video cameras on board police cruisers. Societal use and dependence on technological advances in both the work and home environments is just as evident. Computers are now common in both environments, having a significant impact on society's perception of technology use.

This study is generally about the use of visual surveillance technology in law enforcement. To clarify and provide a more detailed understanding, the focus is then narrowed to mid-sized police agencies, and finally to a real mid-sized police agency, the Bakersfield Police Department, in Bakersfield, California. The Bakersfield Police Department serves a population of 182,000 with 249 sworn officers. The city is typical of many mid-sized cities in California in that its rural "roots" are dissipating as

phenomenal growth has produced a more urban environment. Mid-sized suburban cities grew at a blazing rate in the 1980's. That growth was fueled by job growth, cheap land, and elbow room. Bakersfield is typical of the pattern, in that it is right off an interstate highway that is linked to a major metropolitan city, Los Angeles. The population percentage gain from 1980 to 1990 was 65.63%.[1]

A literature scan was conducted on the issue to develop an understanding of the forces that are shaping it and the environment in which it is operating. The scanning information is presented in five parts:

Fear of Crime, Terrorism, and Bad Cops

Urban Increase-Budget Decrease

Legal Concerns

Fear of Government and Police

Video Momentum

FEAR OF CRIME, TERRORISM, AND BAD COPS

The public's perception of its vulnerability to crime has been a perennial top concern of citizens and government officials alike. The recent riots in the streets of Los Angeles after the acquittal of four white police officers in the Rodney King case was televised to millions in their homes. The both subtle and not so subtle images and commentaries were a rather constant reminder that the "police" were unable to protect either property or life. Gun sales in the surrounding cities and, indeed, the entire nation,

skyrocketed. The brutal beating and robbing of Reginald Denny was also aired countless times.

Were the riots an anomaly and not the norm? The murder total in 1991 for Los Angeles was 1,276, rape 1,966, robbery 39,778, aggravated assault 47,104, and 68,655 auto thefts.[2] Mid-sized cities are plagued with similar crime problems. Fresno, California saw a 20% increase in the FBI crime index in the first six months of 1991. If actual victimization or news coverage of crime fails to convince the public to be afraid, then there is always the recreation of crime. Crime shows such as "Americas Most Wanted," "Unsolved Mysteries," or "911 Emergency Rescue," recreate the most sensational crimes, adding to the fear factor.

Terrorist acts cause a lingering fear. Futurist Marvin J. Cetron, in his article The Growing Threat of Terrorism, writes:

> International terrorism will continue to grow into the twenty-first century. Increasingly, home-grown terrorism will be a problem for the United States.
>
> (Antiabortionist) Planned Parenthood offices and women's health clinics that offer abortions have already been bombed. Attacks will get worse because religious groups believe that God's law puts them above civil law and other people's rights.
>
> (New Targets) Many vital industries and resources are staggeringly vulnerable to attack. Even if there were the will to do so, it would be expensive and inconvenient to guard every office and factory.[3]

Other recent world events such as the Iraqi war have also increased the fear of terrorism. A January 1991 headline read "Terrorist Attack Feared." The State Department issued statements that terrorists supported by Iraq were planning attacks around the

world if war broke out over Kuwait. "The government ordered an anti-terrorism watch within the United States, enhancing airport security, telling nuclear plants to be on guard, and photographing and fingerprinting everyone entering the country with Iraqi or Kuwaiti passports."[4]

No single incident in police history has ever more personified what a "bad cop" is than the police clubbing of a Los Angeles motorist named Rodney King.[5]

National leaders around the country decried what those "bad cops" had done. Even the President of the United States felt compelled to address the nation and express his anger and shock at what law enforcement officers had done.

Other notorious California cases include: two Long Beach officers tried for assaulting black activist Don Jackson, smashing Jackson's head through a plate glass window; San Bernardino County Sheriff's Office settling a civil suit which accused deputies of "free swinging" at five Mexicans while breaking up a party; a civil suit settled with a Torrance, California partygoer that was hit eight times with a baton while a second officer held the man; an elite Los Angeles County Sheriff's Department narcotics squad convicted of skimming drug money.[6]

The fear of crime, terrorism, and bad cops all drive the public's demand for security in their persons and their properties. Visual surveillance technology may be a method that both increases the sense of safety and at the same time monitors the actions of the police.

URBAN INCREASE - BUDGET DECREASE

At the same time cities are experiencing growth via population and demographic shifts from rural to urban, their fiscal resources to provide services are strained. Additionally, there are unprecedented changes occurring where government is shifting responsibility for delivery of services from federal to state to county and city government. City governments will be forced to replace traditional management and planning with new strategic-planning techniques. As urban problems increase, they are mismatched with the citys' revenues and tax base. Being placed in this self help mode will force many cities to reduce services.[7]

A recent article in U.S.A. Today related just how extensive government money problems are. "The federal government isn't the only one having money problems. Two-thirds of state legislators report their budgets are in trouble, with almost 60% girding for possible tax hikes, according to a new survey."[8]

As urban areas like Bakersfield, California grow, and crime grows accordingly, what does the future hold for law enforcement, the community, and the criminal? This issue prompted the Sheriff of Kern County, California to respond, "Deputies are so few in some neighborhoods that drug dealers operate openly on street corners as the occasional patrol car drives right by. We're at the point we can't even protect our own deputies with adequate backup, much less adequately protect the public."[9] The deputies echoed this same sentiment in a statement by their association president, Ron Tuculet, who said, "Deputies say it is well known, all the way to Los Angeles, that there's scant coverage in Kern County. There are very few law enforcement officers visible in the county areas."[10]

Clearly, law enforcement will not in the present, and not likely in the future, escape this dilemma. Just as city government reshapes the way it conducts business, so too must law enforcement. Visual surveillance technology may be one of the new ways for law enforcement to do its business.

LEGAL CONCERNS

Visual surveillance technology as previously described has had very few legal challenges, partly because it has been used so seldom. There have been legal challenges to other forms of surveillance that have standing decisions that influence the entire issue of police surveillance.

The use of electronic equipment to eavesdrop on private conversations in a public place was decided by the U.S. Supreme Court in 1967. The case was Katz vs. U.S. and it held that the use of eavesdropping equipment to listen in on private conversations, even if in a public place, was illegal.[11] The audio issue of public place surveillance, with some exceptions, has thus been decided at this time.

In the Katz case the courts also addressed what is now referred to as the "plain view doctrine." Plain view is not a search, "It is the observation of crime-related evidence from a place you have a lawful right to be."[12]

There are also cases that address aerial overflights by law enforcement. One important federal case (Ciraolo, 1986, 476 U.S. 207) holds that "persons on the ground have no privacy from warrantless aerial observations made from aircraft flying in a

physically nonintrusive manner in publicly navigable airspace, typically 1,000 feet or more above the ground."[13]

As a result of California Supreme Court decisions on aerial surveillance, the California Department of Justice has made recommendations to agencies on the use of aerial observations in California. Some of the recommendations on insuring legality include having the flights "random and routine of open fields, rural, noncurtilage, or public lands."[14]

Videotape evidence of drunk drivers is being accepted not only in California courts but in courts throughout the country. Video surveillance of public streets, sidewalks, parks, etc. seems to be passing the legal test similar to the drunk driving tapes. F.B.I. legal expert, Robert A, Fiatal, in his article Video Surveillance and the Fourth Amendment, wrote that "no constitutionally protected right to privacy is violated when video surveillance is done in public areas."[15]

FEAR OF GOVERNMENT AND POLICE

Be it newspaper, journal, magazine, or book, there are countless sources that espouse that the public should both fear and mistrust the government and the police. This mistrust will likely be a factor in considerations of police use of visual surveillance technology to police public locations. A sample of both past and present day authors of mistrust evidences that mistrust will be a factor.

The 1975 Director of the American Civil Liberties Union, Aryeh Neir in the introduction of his book, Dossier: The Secret Files They Keep on You, writes:

> Dossier-building is at odds with the idea of a free society. It also brings about just what it tries to prevent, a nation of troublemakers. The dossiers THEY are keeping on you and me follow us everywhere. They violate our private lives, they keep us from jobs, from mortgages, from bank loans. They may put us behind bars even when we are innocent. Dossiers may tell lies about us and those lies may haunt us all our lives.[16]

A more current author of mistrust is Gene Stephens. In his article "High Tech Crime Fighting: The Threat to Civil Liberties," he writes,

> This article deals with what comes next in many formats of surveillance by the police. Listening devices that can record conversations through solid walls from many miles away are already available; supersensitive video devices that can record shape and motion both in still and moving pictures, through walls and ceilings are also now available. If anyone - government official or voyeur - can see and record one's every action despite closed doors and drawn shades, then can there be any reasonable expectation of privacy left?[17]

VIDEO MOMENTUM

Video technology has been adopted by both government and the private sector because it is effective and it saves money. Some firms are now using video conferencing instead of face to face meetings that require wasted travel time and costs. A San Francisco firm used a video conference with their New York colleagues, saving $7,500 in travel costs and two days of travel time.[18]

Government is taking advantage of video technology's unique applications too. Prisoner transportation from jail to the courthouse is both expensive and a security risk. Many California courts are now using cameras and television monitors to link the two facilities. Judges and defendants face one another on

television monitors and fax machines are used to ship documents between the court and jail. This program has been praised by court administrators for its efficiency and cost savings. Plans are under way to link the probation office and public defenders office to the jail as well.[19]

The Devonshire Division of the LAPD, one year after the Rodney King incident, has recruited citizens armed with a police radio, binoculars, and a video camera to aid in their fight against crime. Captain Vance Proctor said two factors brought the program into being, "community interest and a projected staff shortage."[20]

In Newark, New Jersey, officials boast that its closed circuit television monitoring system of the crime-ridden downtown district is the first permanent "Video Patrol" in the country. "Everyone is facing the same problems: decreasing budgets and workforces, and the responsibility to do more," says Newark Mayor Sharpe James. "This system takes one officer and allows him to do more, see more, and be in a position to coordinate more. We are getting more for less."[21]

SUB-ISSUES

The literature scan depicts an environment of four concerns providing impetus to develop and use visual surveillance technology: 1) citizen fear of crime, terrorism, and bad cops; 2) urban increase of population and "urban" problems coupled with a decreasing budget; 3) generally supportive case decisions of public area surveillance; 4) video technology being successfully used in new applications by both government and non-government organizations.

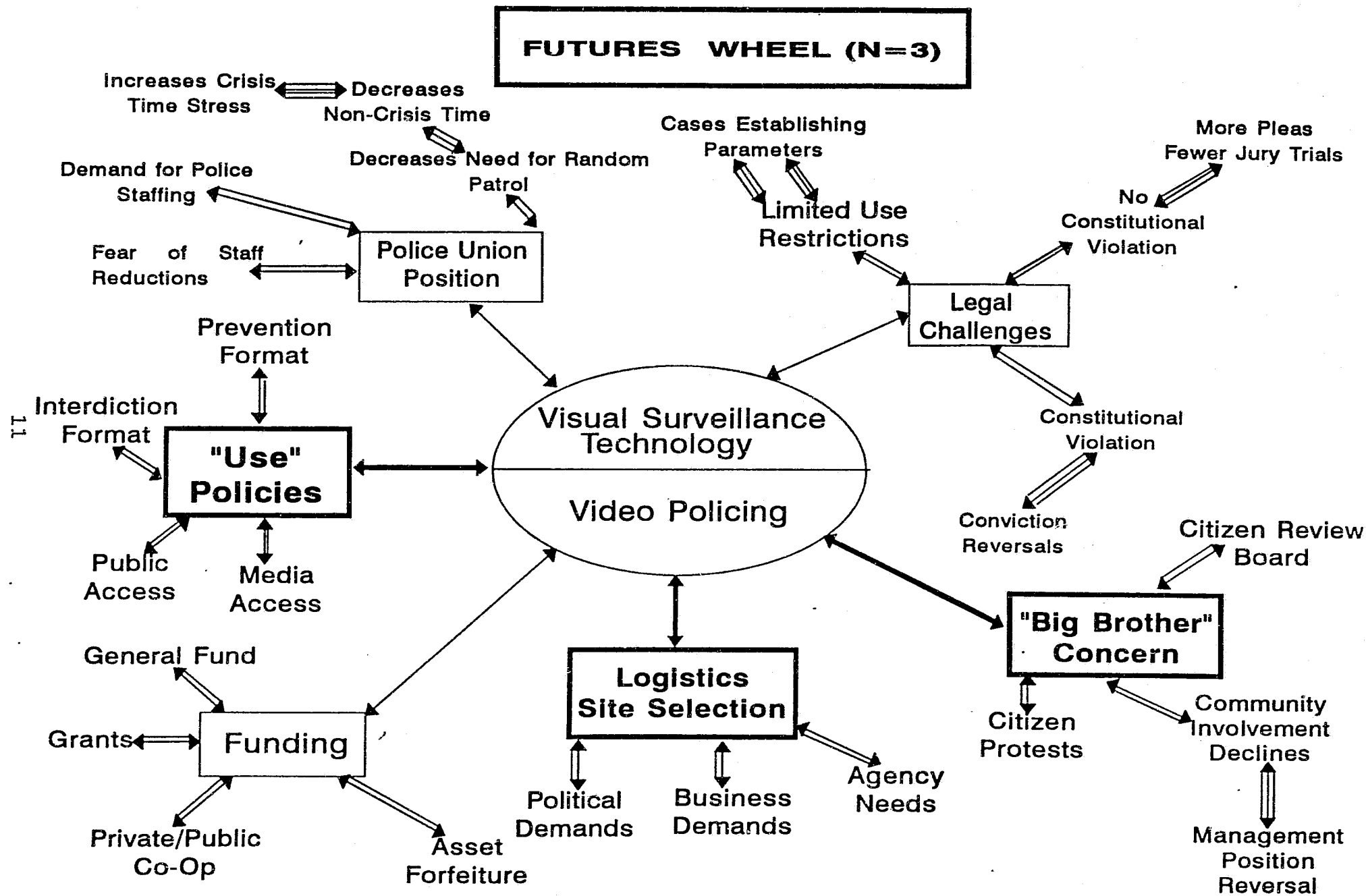
The scan also depicted an impediment, which is some level of general mistrust of government and the police.

To further focus on the issue of "Will mid-sized police agencies use visual surveillance technology to police public locations by the year 2002?", a Futures Wheel was developed. A Futures Wheel is a technique to study the likely impacts of the issue when projected into the future. The Futures Wheel data was obtained by consensus of Panel 1, consisting of two colleagues, as well as the author (Appendix A). Three impacts or **sub-issues** that were identified for additional study were:

A. How will agencies manage the "Big Brother" concern of citizens?

B. How will agencies manage the criteria issues raised, regarding such things as the acceptable level of surveillance and site selection?

C. How will agencies manage the enforcement issues raised by use of this technology?



The Futures Wheel data was developed by consenus of Panel 1. "Bolded" Impact areas indicate selected sub-issues for study

DEFINING THE FUTURE

To develop an image of the future, relevant trends, and events that may influence the issue and sub-issues, need to be identified, rank ordered, and then forecasted. The methodology to identify and rank order events and trends to be used is the Nominal Group Technique (NGT). A Forecasting Panel will then be used to evaluate or forecast the selected events and trends. Events are significant singular happenings that occur rarely and trends are multiple, related events that form a continuing pattern.

Seven members of the community representing a cross section of expertise were used as a NGT Panel and as a Forecasting Panel, identified as Panel 2 (Appendix A).

The NGT Panel was introduced to the issue and sub-issues and then asked to identify events and trends that, if they occurred, would have a likely influence on the issue over the time frame 1992-2002. The NGT process used to generate this information included: the private and individual generation of ideas in writing; round robin recording of ideas; group discussion for clarification; a preliminary vote on the ideas; discussion of the vote; and a final vote.

CANDIDATE TRENDS

The following list of trends was developed by the NGT Panel and are not in rank order.

1. **Level of fiscal resource**
2. Demand level of police service
3. **Level of enforcement against drug abuse**
4. Level of violence against police officers

5. Level of violence in public schools
6. Level of litigation concerning VST
7. Level of violence against the elderly
8. **Level of private security participation in the law enforcement arena**
9. Level of citizen dissatisfaction with traffic congestion
10. Level of concentrated criminal activity
11. Level of violent crimes
12. **Public perception of law enforcement**
13. Level of legal constraints
14. Level of risk taking by law enforcement
15. **Changes in the philosophy of policing**
16. Level of liability awareness
17. Level of public support for law enforcement
18. Level of minority support for law enforcement
19. Societal acceptance of technology
20. Change in costs of VST technology
21. Level of special interest groups mistrust of government
22. Level of business related crimes
23. Officer to citizen ratio
24. Level of high profile misconduct cases
25. Level of eyewitness television programs

SELECTED TRENDS

The trends were rank ordered by the NGT Panel on a criteria of the need for a good long range forecast and the ability to be effected by policy, and the top five are:

Trend 1 (T-1) Level of Fiscal Resource. Whether or not fiscal resources continue to decline or resurge will factor into how police agencies adapt to service delivery. The Panel believed new levels of constraint would provide impetus to the use of non-conventional techniques such as VST.

Trend 2 (T-2) Public Perception of Law Enforcement. The confidence level or trust in law enforcement was seen as important in dealing with the "Big Brother" concerns of citizens. VST might also be dual-focused, to watch citizens and officers alike, if the trust level was low.

Trend 3 (T-3) Changes in the Philosophy of Policing. The traditional style of command and control policing is being replaced in some cities with a community based style of policing. A change in philosophy could impact the enforcement issues of VST.

Trend 4 (T-4) Level of Enforcement Against Drug Abuse. Drug abuse and drug related crime dominate law enforcement's time, money, and manpower. An increase or decrease in this problem would effect law enforcement,

and correspondingly, the potential application of VST to drug crime.

Trend 5 (T-5) Level of Private Security Participation in the Law Enforcement Arena. Just how much the public will permit or demand the use of private "police" will impact who controls the use of VST.

CANDIDATE EVENTS

Next, the NGT Panel generated a list of events that, if they were to occur, would have a significant impact on the issue within the next ten years. The following list of candidate events are not rank ordered:

1. **State mandates use of VST**
2. Peace officer union engages in long term strike
3. Affirmative U.S. Supreme Court decision for VST
4. **Private security company contracts law enforcement** duties in the city
5. **Multiple terrorist acts occur**
6. City pays multi-million dollar excessive force award
7. Significant event captured by on-board video equipment in patrol car
8. DOJ grants made available for VST
9. **Budget crisis forces officer layoffs**
10. Videotape discovery reduces storage space 20 fold
11. State mandates VST at all high schools
12. Underworld develops microwave jamming capabilities

13. Communications and security companies collaborate in offer of neighborhood VST
14. Major scandal involving police executives
15. City implements reduced work week for police officers due to budget problems
16. **Federal funds withheld due to traffic congestion and pollution**
17. Insurance company offers reduced rates to homes covered by VST
18. Repeat gang attacks in middle class neighborhood
19. Another significant negative event of police misconduct captured by citizen's home video
20. Police officers demand video cameras in squad cars as safety equipment
21. Trade embargo with Japan occurs, making VST repair difficult
22. Public employee's retirement system collapses
23. Citizen complaints set record high

SELECTED EVENTS

The candidate events were rank ordered and criteria selected based on the likelihood of their happening and their significance to the issue. The top five events are listed with a description of how they relate to the issue or sub-issues.

Event 1 (E-1) State Mandates Use of VST. A legislative act requiring the use of surveillance technology based on a set of criteria established by the state. The NGT

Panel believed transportation centers, low income housing areas and senior citizen centers with a high victimization rate would be likely locations that would require police to monitor as a security measure for citizens.

Event 2 (E-2) Federal Funds Withheld Due to Traffic Congestion/Pollution. VST placed at critical locations could provide instantaneous information regarding accidents and congested areas needing traffic control. VST was viewed as a way to mitigate federal funds from being withheld.

Event 3 (E-3) Multiple Terrorist Acts Occur. The Panel described this in terms of an airplane bombing or governmental buildings being bombed or seized by terrorists. VST was seen as a measure to discourage incidents.

Event 4 (E-4) Private Security Company Lands "Police Contract" in City. Police policies of resistance or cooperation would likely influence decisions to contract with private security for traditional police territory. VST may offer another alternative to provide more cost effective service delivered by the police agency.

Event 5 (E-5) Budget Crisis Forces Officer Layoffs. This event was described as a possible catalyst moving

the agency towards a more cost effective techno-police, or policing by video camera. VST was also discussed as a possible revenue generator to offset officer costs.

With the selected trends and events now identified for forecasting, the Forecasting Panel was given trend and event evaluation forms. The trend evaluation form establishes the current level of the trend at 100. Each Panel member was asked to forecast each trend, considering the current level of 100, 5 years ago, 5 years from now, and then 10 years from now. Each member was also asked what they thought the trend level should be 5 and 10 years from now. The median results of the trend evaluation are depicted in Table 1.

Following the trend forecasts are the event forecasts. The Forecasting Panel was asked to estimate the number of years until the probability of the event occurring first exceeds zero. Each member was then asked to estimate (0-100) the probability the event would occur 5 and then 10 years from now. Panel members were also asked to estimate the positive and negative impact of the event if it occurred on a 0-10 scale. The median forecasts of the Panel are depicted in Table 2. After Tables 1 and 2 the trend and event forecasts are graphically depicted with a discussion of the significant aspects.

TABLE 1
TREND EVALUATION

Trend Statement (Abbreviated)	LEVEL OF THE TREND (TODAY = 100) 5 Years Ago	Today	5 Years From Now	10 Years From Now
Level of Fiscal Resources	80	100	130 / 120	150 / 140
Public Perception of Law Enforcement	110	100	110 / 200	120 / 300
Changes in Philosophy of Policing	90	100	150 / 125	200 / 150
Enforcement Against Drug Abuse	90	100	180 / 200	220 / 300
Private Security In Police Arena	80	100	110 / 100	125 / 100

(N=7)

The data in Table 1 represents the median forecasts of the Forecasting Panel. In the "5 years from now" and the "10 years from now" boxes the number in the upper left represents the nominal (will be) forecast and the number in the lower right represents the normative (should be) forecast.

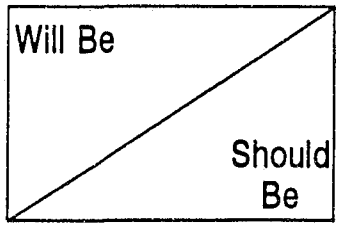


TABLE 2
EVENT EVALUATION

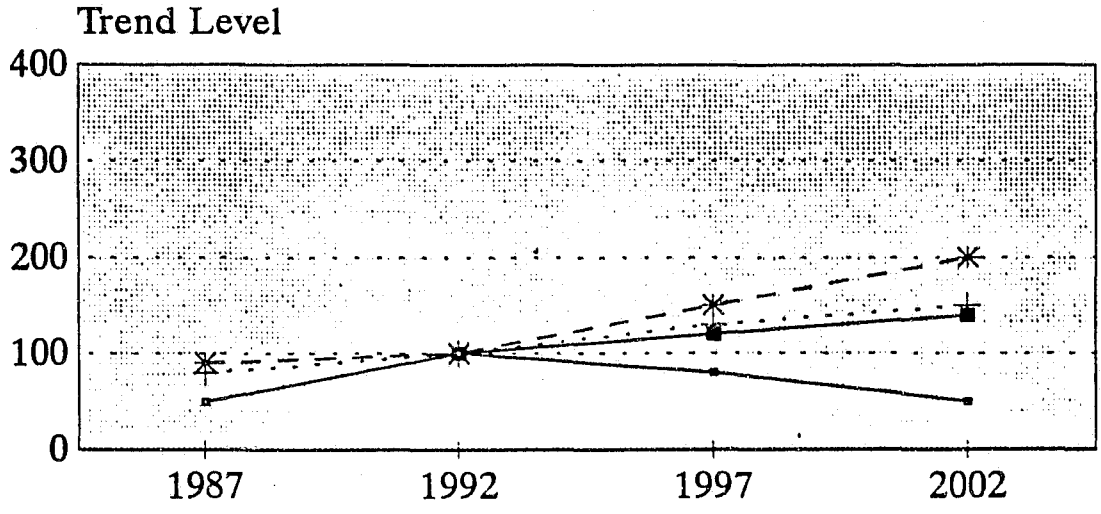
EVENT STATEMENT	YEARS UNTIL PROB-ABILITY FIRST EXCEEDS ZERO	PROBABILITY		IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
		5 YEARS FROM NOW	10 YEARS FROM NOW	POS (0-10)	NEG (0-10)
State Mandates Use of VST	3	15	20	10	7
Fed. Funds Withheld Due To Traf. Congestion	5	20	40	8	1
Multiple Terrorist Acts Occur	4	30	50	10	1
Private Security Gets Police Contract	3	20	30	3	8
Budget Forces Officer Layoffs	3	35	50	5	5

(N=7)

Table 2 shows the median forecast of the Forecasting Panel. The probability of each event occurring is forecast by the number of years until the probability first exceeds zero, and then using a scale of 0 -100 estimates the probability 5 and 10 years from now. The last two columns represent the Panel's quantification of positive and negative median impacts on the issue if the event were to actually occur. The scale is 0 - 10.

The Low, Median, High, and Normative Trend forecasts are graphically depicted in the following trend graphs. Below each graph is a discussion of the most significant aspects of the forecasts.

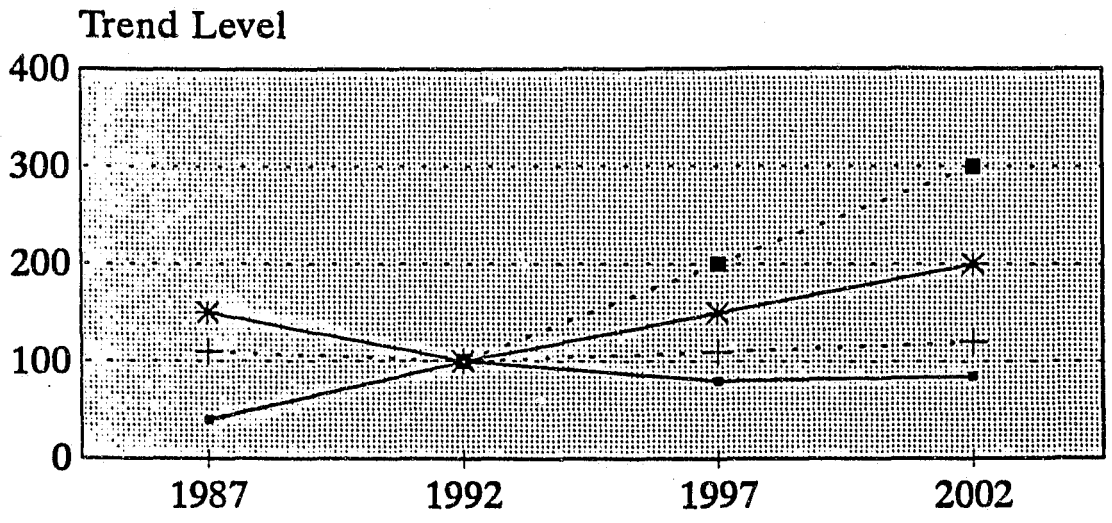
T-1 Level of Fiscal Resources (N=7)



Low	50	100	80	50
Median	80	100	130	150
High	90	100	150	200
Norm. Med.		100	120	140

There was a general consensus in the historical look that 5 years ago funding was considerably less than the present. The range was from 50% less to 10% less resources. Consensus decreased at the 5 years from now, and decreased again at the 10 years from now points. The Panel explained they were uncertain beyond 5 years just exactly how the economy would turn, and what share government would have in either an up or down swing in the economy. The should be forecast parallels the median will be forecast closely, indicating a conservative and somewhat optimistic view of the next ten years. The normative forecast increase of 40% resources at the ten year point was made with law enforcement's needs to improve service in mind. To the Panel, this conservative increase meant that law enforcement must investigate more cost effective ways of policing.

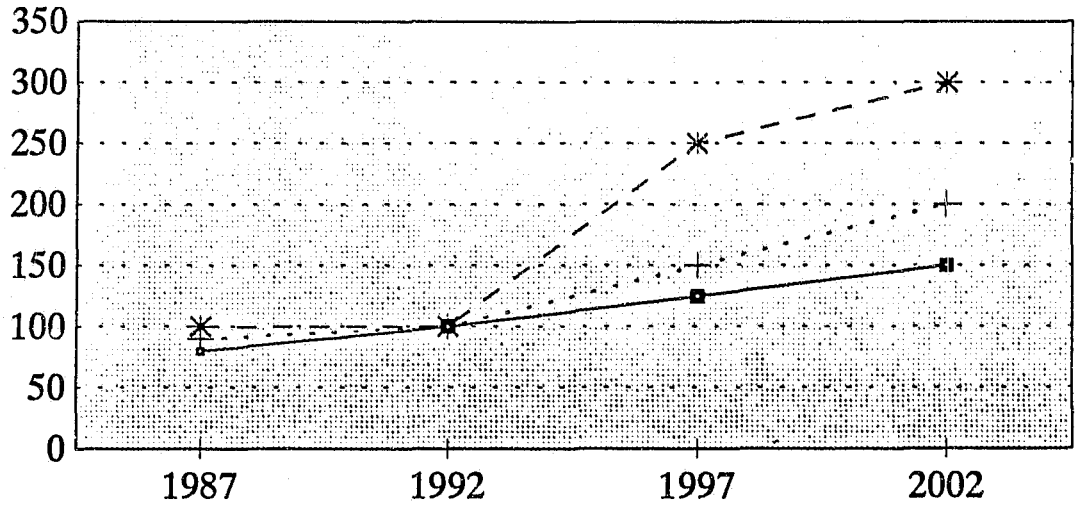
T-2 Public Perception of Law Enforcement (N=7)



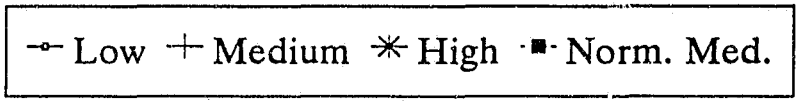
Low	40	100	80	85
Median	110	100	110	120
High	150	100	150	200
Norm. Med.		100	200	300

The analysis of the past 5 years produced a range between the high and low forecast of 110. The range between the high and low forecast decreases to 70 at the 5 years from now point and then increases to 115 at the 10 year point. The median and low forecast at the 5+ year and 10+ year points are just slightly below and slightly above the present perception of law enforcement. The Panel explained that after the Rodney King incident that people will perceive police in a negative way for years to come. At best, the image will be slightly improved from 100 to 120 according to the median forecast. The normative median forecast is the most distinct in the group. The increase at 5+ years is 100% and then another 100% at 10+ years. The task before law enforcement to improve how it is perceived by the public was seen by the Panel as enormous. The Panel saw VST as an opportunity for law enforcement to police itself as well as the public and improve the overall image in the process.

T-3 Changes in Philosophy of Policing (N=7)

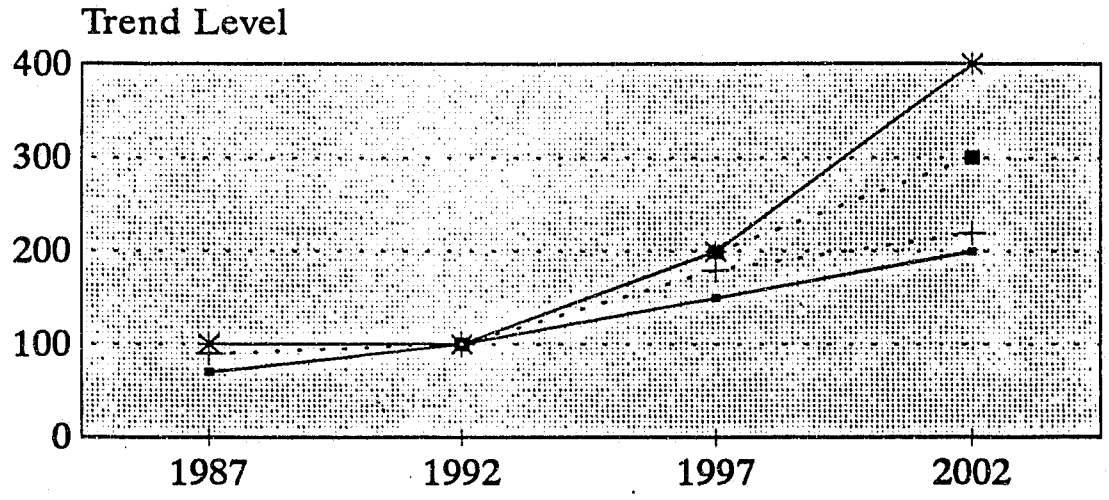


Low	80	100	125	150
Medium	90	100	150	200
High	100	100	250	300
Norm. Med.		100	125	150

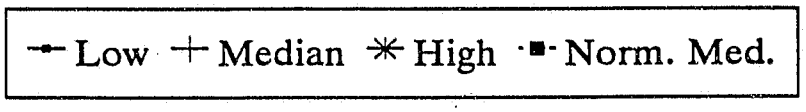


The Panel's forecast show a gradual and consistent level of change from 5 years ago to 10 years from now. The greatest range between the low, median, and normative median is only 50%. The Panel did not believe there was a need to completely overhaul the current philosophy of policing. The change level depicted as gradually increasing was described as the ongoing process of improvement, the same as what other government organizations need to strive for. The distinctive attribute of this forecast is the nominal high evaluation. One member was adamant that in the shadow of the Rodney King incident, law enforcement must show radical and immediate departure from policing in the status quo fashion. That member did not see VST as that radical change. Socially conscious policing best describes that Panel member's forecast.

T-4 Level of Enforcement Against Drug Abuse (N=7)

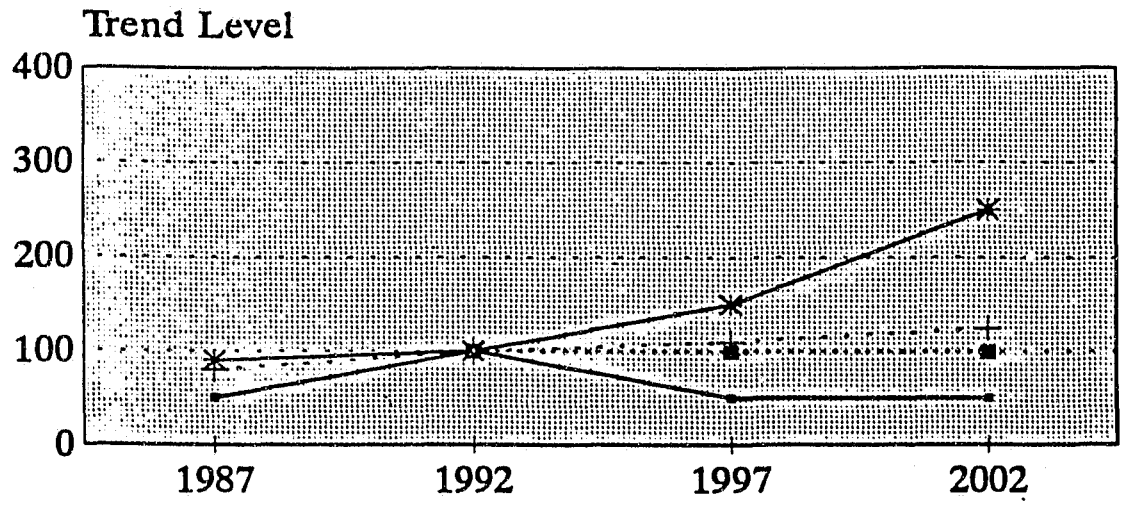


Low	70	100	150	200
Median	90	100	180	220
High	100	100	200	400
Norm. Med.		100	200	300



Panel members had a high degree of consensus in the 5 years ago and the 5 years from now forecasts. The range was 30% 5 years ago and 50 % 5 years from now. At the 10 years from now point, the range increased to 200%. Although the Panel felt an increase in the level of enforcement was necessary, those in the nominal low and median category were not willing to invest solely in traditional enforcement tactics. VST was seen as a temporary solution to high trafficking areas but not as a long range solution. There was ambiguity about long range enforcement levels even though the normative median forecast depicted a 100% increase in 5 years and another 100% increase in 10 years. The high normative median forecast was explained as a strong desire to impact the problem, although enforcement was not necessarily their choice.

T-5 Private Security in Police Arena (N=7)



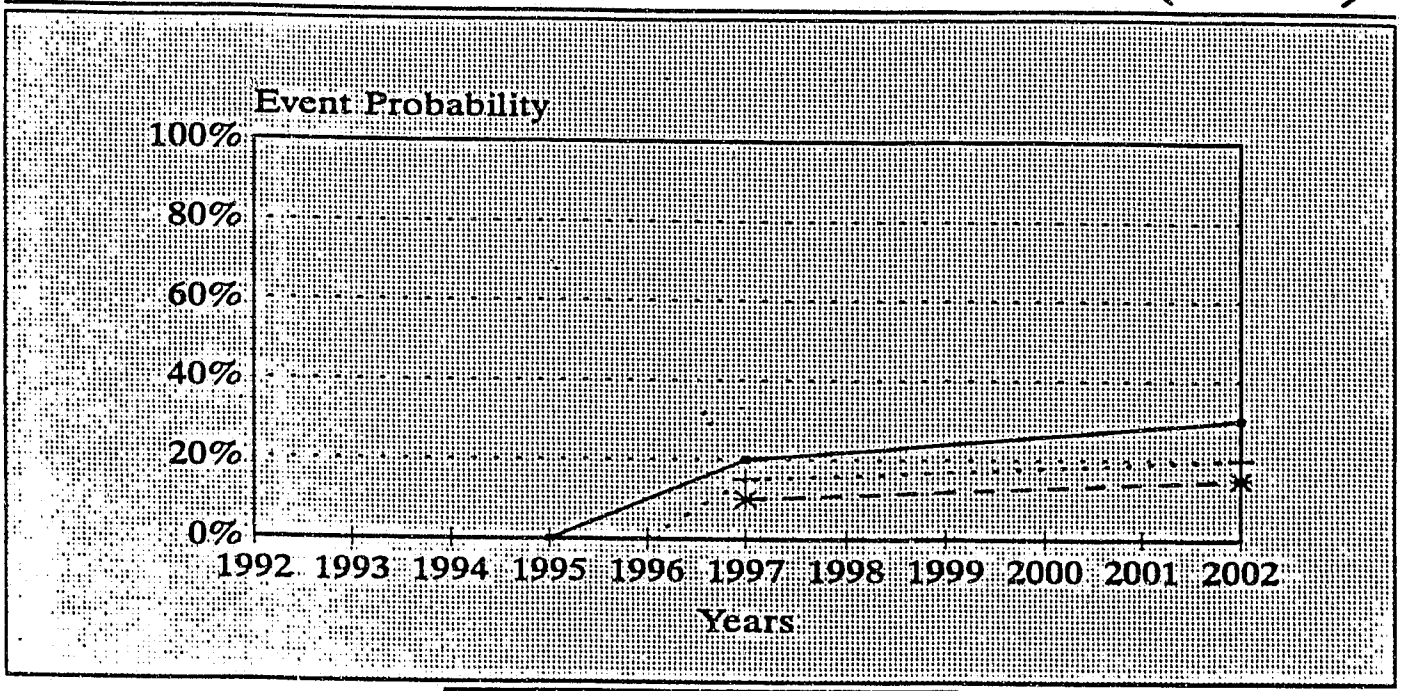
Low	50	100	50	50
Median	80	100	110	125
High	90	100	150	250
Norm. Med.		100	100	100

Low Median High Norm. Med.

Forecasts on this trend decrease in consensus as the future is extended. The range at 5 years plus is 100% and the range at 10 years plus is 200%. The will be and the should be evaluations parallel one another and show a very slight and gradual increase as time extends. The Panel was protective of its local police service and generally expressed an unwillingness to supplant police officers with security officers. The nominal high forecast was significantly higher 10 years extended than was the nominal median forecast (100%). This was explained in terms of cost. The Panel members believed because private security is a business and profit motivated that it would deliver services at a lesser cost to the public. The Panel did agree that VST would most likely be implemented in the high increase of security into the police arena scenario.

The High, Median, and Low event forecasts are graphically depicted in the following graphs. Below each graph is a discussion of the most significant aspects of the forecasts.

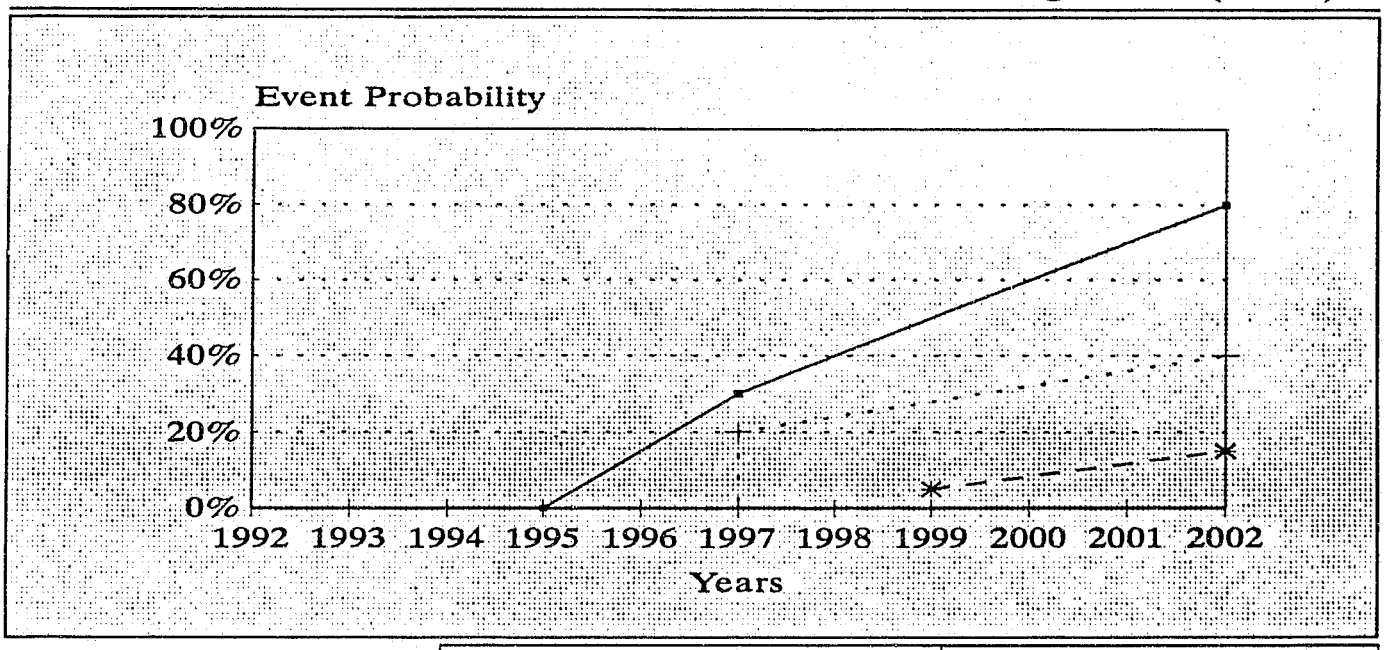
E-1 State Mandates Use of VST (N=7)



				IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
				POS (0-10)	NEG (0-10)
High	3	20	30		
Median	4	15	20		
Low	5	10	15	10	7

The highest probability of this event occurring was 30% 10 years from now. The soonest the event probability exceeds zero is 3 years from 1992. The range in probability percentages is narrow from the 5+ year to 10+ year point, indicating consensus that the state only has a 10%-30% probability of effecting such a program. The Panel believed that local government was not likely to be mandated VST. If the mandate did occur, VST would have the maximum positive impact on the issue. Mandated use of VST also carries with it a high negative impact forecast. This was described as loss of local control, increased costs, and wasted resources.

E-2 Federal Funds Withheld Due to Traffic Congestion (N=7)

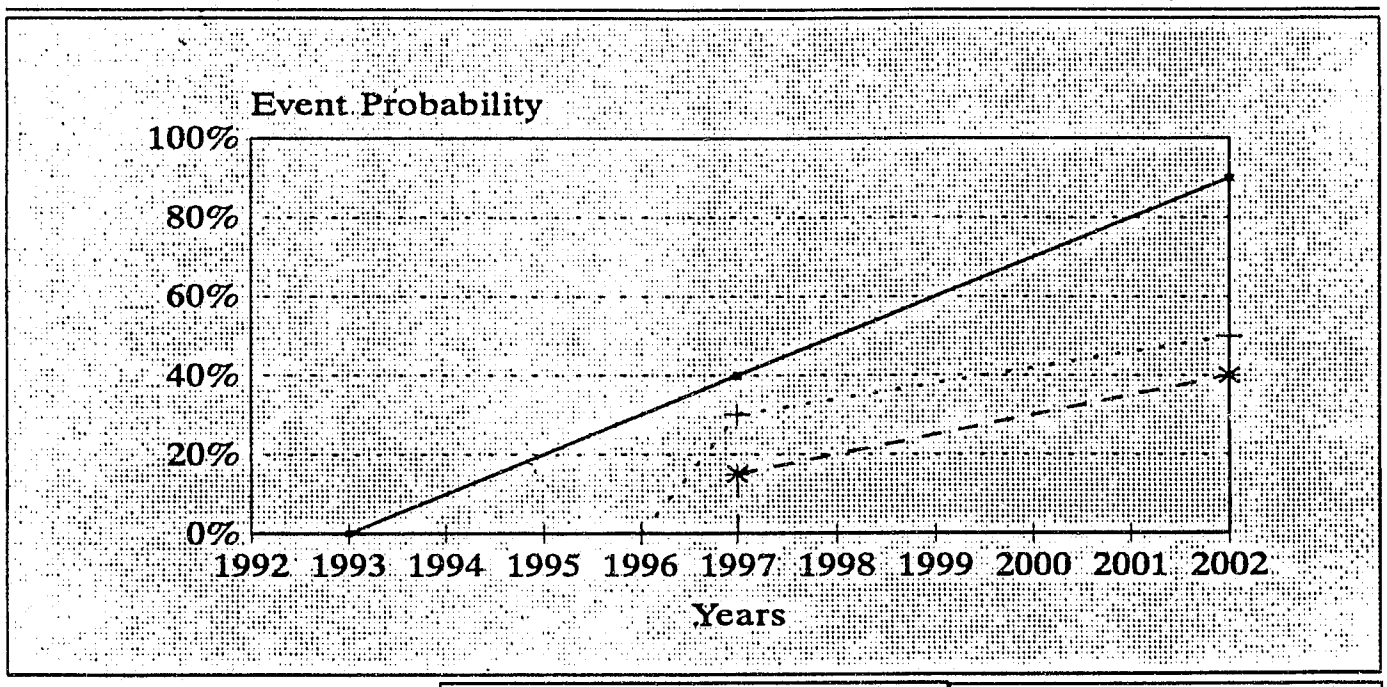


	High	Median	Low	IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
				POS (0-10)	NEG (0-10)
High	3	30	80	8	1
Median	5	20	40		
Low	7	5	15		

The Panel believed this event was very probable at the 10+ year point with the median forecast at 40% and the high forecast at 80%. Ten years downline the Panel believed traffic congestion will not only have peaked in the major cities but in medium sized cities as well. The urbanization process of connecting highways will have left few open spaces. Pollution and traffic congestion is likely to cause federal funds to be withheld. If the median forecast were used, the earliest the probability exceeds zero would be 1997. The probability would double from 20% to 40% by 2002.

If the event were to occur VST would be impacted by a positive factor of 8 and a negative factor of 1. VST would be used as an inexpensive method to demonstrate to the federal government that mitigation techniques were being used.

E-3 Multiple Terrorist Acts Occur (N=7)

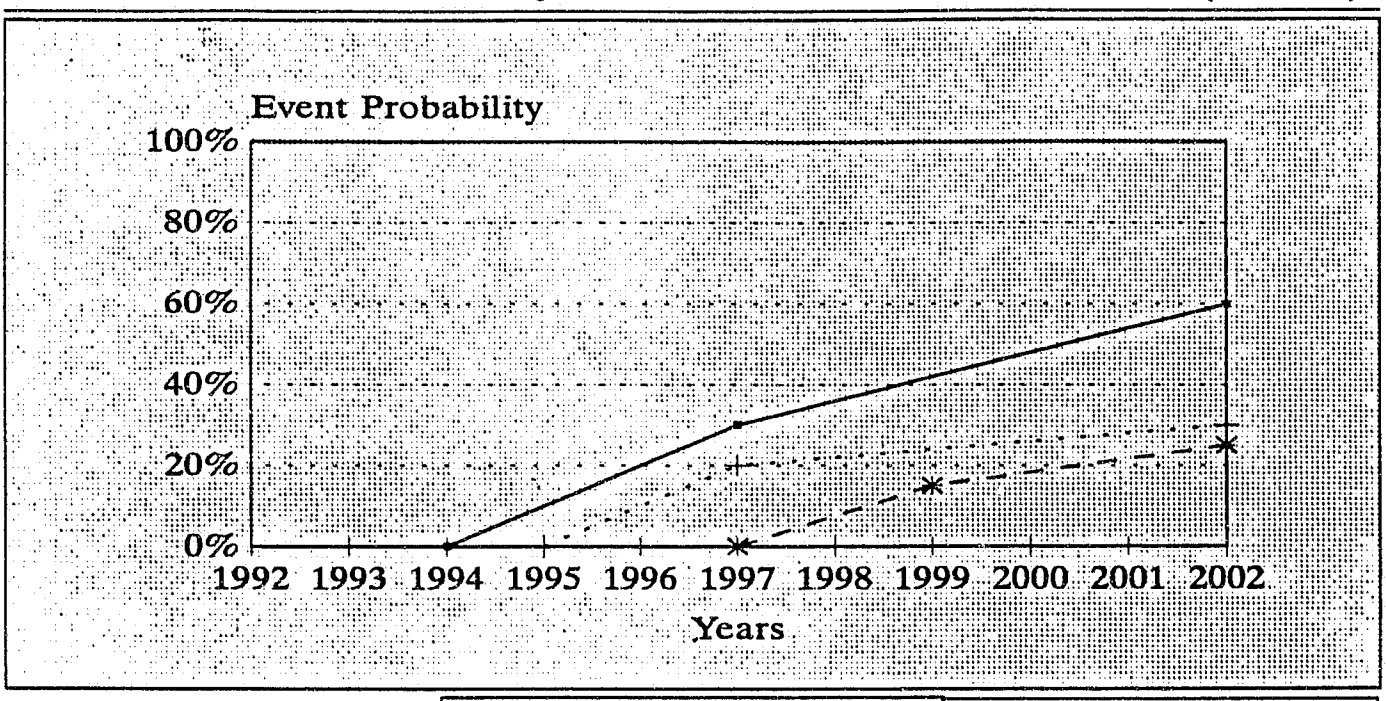


	High	Median	Low	IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
				POS (0-10)	NEG (0-10)
High	1	40	90	10	1
Median	4	30	50		
Low	5	15	40		

Terrorist acts were thought of only in terms of their probability and in terms of what impact those acts would have on the implementation of VST. The forecast of the Panel clearly indicates a consensus that the probability of such acts is high. From 1997 to 2002 in the median and high forecasts the range of probability is 30% to 90%. The lowest year of probability that first exceeds zero is 1995, only 3+ years. The median forecast in 1997 is 30% probability and 50% by 2002.

The Panel viewed the impact of terrorist acts as having a maximum positive impact on the implementation of VST. The demand for security of government buildings, transportation centers, and utility service delivery locations would extend law enforcement resources to the limit. VST was seen as a logical and cost effective means of providing a level security to those facilities.

E-4 Private Security Lands Police Contract (N=7)

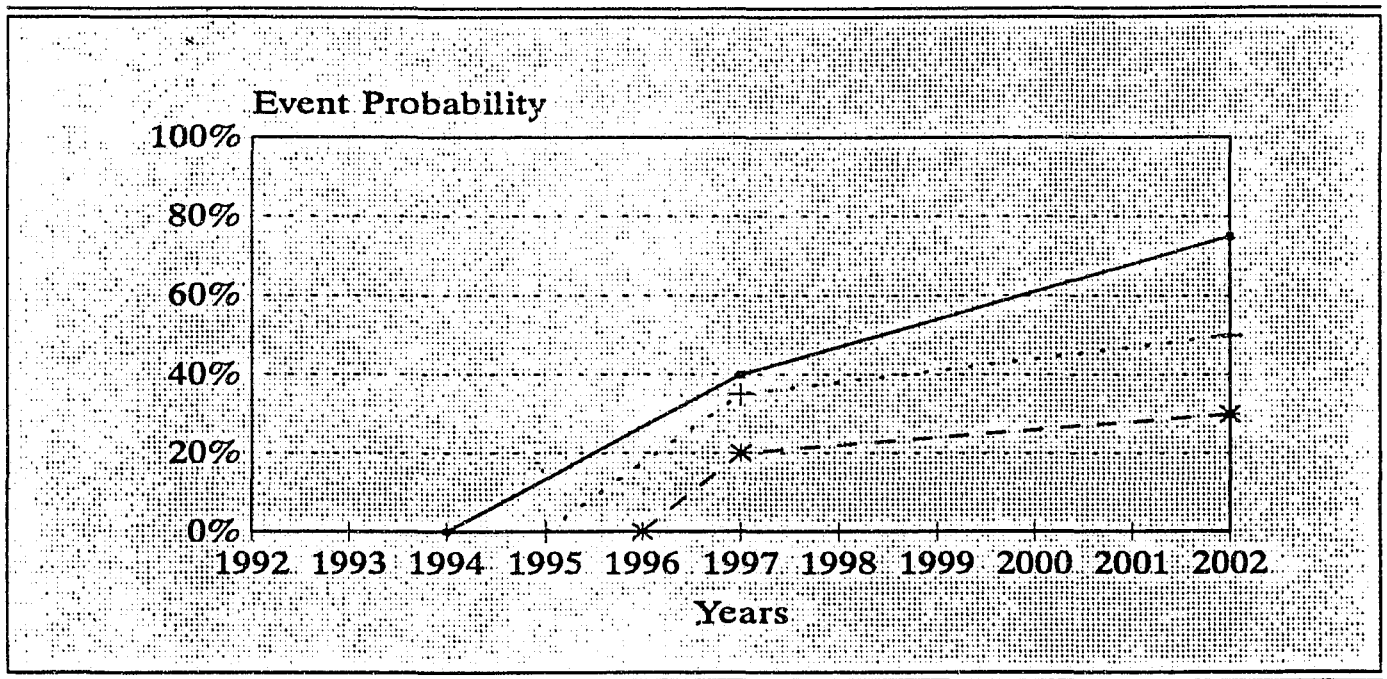


	High	Median	Low	IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
				POS (0-10)	NEG (0-10)
High	2	30	60	3	8
Median	3	20	30		
Low	5	15	25		

Three years is the maximum time before the probability that private security will be involved in the police arena exceeds zero. The most consensus is found in the year 2002 where the median and low forecasts are 30% and 25%. Although the Panel expressed outward resistance to the concept that private security would be making inroads into previous "police" turf, they were consistent in their belief that it was probable.

VST would be negatively impacted by a factor of 8 should this event occur. The Panel felt funding would be very limited if private security were used and that VST would not be a priority item for the police. The private sector would more likely provide a VST service in this scenario.

E-5 Budget Forces Officer Layoffs (N=7)



	High	Median	Low	IMPACT ON THE ISSUE IF THE EVENT OCCURRED	
				POS (0-10)	NEG (0-10)
High	2	40	75	5	5
Median	3	35	50		
Low	4	20	30		

Concern and a pessimistic outlook on future public revenue is apparent in these forecasts. In 1994 the probability this event will occur first exceeds zero; 1995 is the median forecast and 1996 the high forecast for exceeding probability zero. The range between the median and high forecasts in 1997 is 35% to 40%.

The impact of officer layoffs would not be clearly negative or positive with values of 5 positive and 5 negative; 5 is also the midrange value in the scale. Panel members believed that reduction of staff may stimulate the desire to provide service albeit electronic. The negative value indicated resources that were not allocated for personnel would not likely be allocated for equipment.

CROSS IMPACT ANALYSIS

The use of cross impact analysis is a method to further analyze the selected trends and events. The analysis is based on the nominal median forecasts of the selected trends and events. The assumption is that each event occurs and when it occurs it may impact the forecast of the other events and trends.

Two colleagues from the Bakersfield Police Department not involved in the NGT process assisted in evaluating the cross impacts of the events. They were Lieutenant Allen Brown and Sergeant Sid Unruh, identified as Panel 3 (Appendix A). The impact values were decided by consensus. The median forecasts of the events and trends were provided to Panel 3. When an event does occur and impacts another event or a trend, the range of the impact is 0-100%, plus or minus. Each time an event occurrence has an impact on a separate event or trend it is scored as 1 "hit" regardless of the value. A cross impact evaluation matrix is used to organize and tabulate the data.

"Hits" for each row are counted and listed to the right side of the chart as "Impact Totals". "Hits" counted for each column are totaled at the bottom of the matrix and are labeled "Impacted Totals." When the "Impact Total" of an event is high it is called an "actor" event. High "actor" events should be the "primary targets of policy action." The "Impacted Totals" are the reactor events, "they are buffeted by the occurrence or non-occurrence of the actors."[22]

The most significant aspects of the cross impact analysis are included below the matrix on the following page.

Cross-Impact Evaluation (N=3)

Maximum Impact(% change +/-)

MATRIX

**	E1	E2	E3	E4	E5	T1	T2	T3	T4	T5	"Impact" Totals
E1	X	-10	-20	-50	--	-20	-30	50	25	-25	E1 8
E2	70	X	--	20	25	-30	-20	10	-20	--	E2 7
E3	70	--	X	-30	-50	40	-10	30	-30	-15	E3 8
E4	--	--	10	X	10	25	-20	50	-25	90	E4 7
E5	10	20	10	20	X	-50	25	70	-40	60	E5 9

"Impacted Totals"

E1	E2	E3	E4	E5	T1	T2	T3	T4	T5
3	2	3	4	3	5	5	5	5	4

** Legend **

E1 State Mandates Use of VST
E2 Fed. Funds Withheld\Traffic Congestion
E3 Multiple Terrorist Acts
E4 Private Security Gets Police Contract
E5 Budget Forces Officer Layoffs

T1 Level of Fiscal Resources
T2 Public Perception of Law Enf.
T3 Changes in Philosophy of Policing
T4 Level of Enf. vs Drug Abuse
T5 Private Security in Police Arena

The events and trends cross-impact analyzed by Panel 3 are clearly legitimate and interrelated, evidenced by the high impact totals of each event. Event 5, Budget Forces Officer Layoffs, has the maximum number of hits (9), and generally increased the forecast of the other events and trends. Event 1 is significant with 8 "hits" that generally decreased the forecast of other events and trends. Events 2,3, and 4 have high impact totals but are mixed in their positive and negative values. Event 4 is also the most reactive event when another event occurs.

Although budget problems requiring officer layoffs (E-5) is a negative event, the general result is the forecasts of most of the other events and trends were increased. That increase translates into a greater likelihood that VST would be utilized. This is supported by the impact Event 1 has on the other events and trends. Event 1, the State Mandated Use of VST, causes most of the events and trends (which were generally negative in nature) to decrease.

SCENARIOS

The data gathered thus far is pointing to the future development of the VST issue. To narratively describe the future forecasting data, three different scenarios have been prepared.

A scenario as defined by Wayne Boucher is, "a non-fictional narrative-typically written as if by a historian looking back over the forecasted events and trends as if they had actually occurred - intended to clarify the causes and consequences of major developments and thereby facilitate the identification and evaluation of relevant policies or actions by the user."[23] It is important to note that the scenarios are not predictions. The outcomes are driven by the forecast data.

The first scenario presented is the exploratory or "surprise free" scenario. The median forecasts of the trends and events drive this scenario.

The second scenario presented is the hypothetical or "what if" scenario. As an alternative it describes "the results after the given event probabilities have been altered in a particular way."

The third scenario is the normative or "should be" scenario. This scenario is driven by the normative forecasts.

The format of the scenarios will be to look at a "slice of time" in the future. Three newspaper type headlines will be provided to orient the reader, followed by a narrative description of that particular future "slice of time."

Congested Streets Blamed For City's Record Poor Air Quality, The Bakersfield Californian, January 15, 2002.

12 Killed: 23 Injured: Stadium Blast Horrifies City, San Francisco Chronicle, June 2, 2002.

Sales Tax Revenue Is Sacramento Bound Per S.B. 6945. The Bakersfield Californian, April 1, 2002.

The recent 2002 Law Enforcement Technology Conference discussed why VST, despite its technological efficiency, has failed to thrive in the police setting. John D. Agostino, an early pioneer in the industry, provided attendees with some possible explanations.

Agostino related that police agencies have been victims of the fiscal crisis that government has been in for the last ten years. Although resources have increased 50% over the last 10 years, that amount is insignificant when compared to increased costs of law enforcement and increased demand for service. The federal government has transferred its fiscal problems to states, states to counties, and counties to cities. Exacerbating this problem has been the "urbanization" of nearly all cities mid-sized or larger. Continuous urbanization without the fiscal ability to enlarge and improve the infrastructure has led to such problems as overly congested highways and excessive pollution levels. Last year Bakersfield was penalized by the federal government for the unacceptable traffic congestion level, by withholding federal aid until the problem is mitigated.

Police agencies overwhelmed by the concurrent police problems that urbanization has brought, underfunded and understaffed, have

reluctantly conceded to private security companies contracting police services in some areas of their jurisdiction.

Agostino then rhetorically stated that these factors seem to suggest an increase in the use of VST. Two additional factors have made VST a political "hot potato." Bakersfield was forced to layoff police officers due to the previously described fiscal woes. The police officer association became very vocal about the use of VST as a replacement for officers. Prior to the officer layoffs, VST was viewed by most as a supplemental tool for officers and was not publicly resisted by the officer association.

The second factor that has slowed a more broad scale use of VST is many police executives are still clinging to the old philosophy of "community oriented policing." Some chiefs of police were very outspoken, pronouncing, "a camera can't talk to a kid on a bicycle" or "a camera can't come into your store and check on you."

Agostino concluded that for VST to make inroads into the public law enforcement arena, the concerns of officer associations, and concerns of the "guards" of community policing must be addressed.

HYPOTHETICAL SCENARIO

5 Year Anniversary of Prop. 13 Reversal, Sacramento Bee, July 1, 2002.

Surgeon General Reports Drug Abuse Decline for 5th Consecutive Year, Washington Post, January 30, 2002.

Ridership on Light Rail Is Up. The Bakersfield Californian, May 19, 2002.

The 2002 city manager's "State of the City Message" was well attended by reporters and the Bakersfield community. Her message was generally positive and covered a wide variety of topics. The three main topics were the fiscal state of the city, crime, and transportation.

The city manager attributed the sound fiscal status of the city with a 3.4 million dollar reserve to the upswing in the economy (sales tax revenues were up 15%), and the third straight year of recouping property tax revenue due to the reversal of proposition 13. The improved economy has allowed the city to make up lost ground in the staffing of the police department with 10 new positions approved.

She also announced that Bakersfield was keeping pace with the rest of the nation in that drug abuse has declined slightly over the last two years. The police department's D.A.R.E. program was credited for its contribution to the decline. The city manager reaffirmed her continued commitment to the police department's community based police program which began in 1993.

The city manager also praised the 10 year old Metropolitan Transit Light Rail as a responsible solution to the traffic congestion and pollution dilemma. Longstanding federal monies were at risk without mitigation. She related that the light rail not only preserved those monies but provided new monies for the construction and maintenance of the light rail.

During the question/answer period, a reporter asked the city manager whether or not the police department would be using VST like several other cities and she replied, "what for?"

NORMATIVE SCENARIO

Measure 42: Public Safety Assessment District, Passes, The Bakersfield Californian, November 3, 1997.

USC Study Gives California Law Enforcement High Citizen Approval Rating, Newsweek, September 4, 2002.

Cal Chiefs Oppose Mandated Use of VST, Sacramento Bee, November 10, 2002.

Bakersfield Police Chief Ray Jones addressed the 2002 Cal Chiefs' Conference held in Monterey, California on the topic of "Police Use of Visual Surveillance Technology." The following are paraphrased excerpts of that talk about the Bakersfield experience over the last 10 years.

Prior to Bakersfield's leap into the world of visual surveillance technology, two significant events had to occur. The first was the approval of a local measure to tax specifically for law enforcement. That event secured "adequate" funding to maintain the same level of service with commensurate personnel. It also calmed the officer association about impending layoffs. The second event was a change in staff's position that VST was not contradictory to the community oriented policing style we had developed.

VST was initially promoted as a mitigation technique for traffic congestion, enhanced security for our major utility service sites, and as a security measure for downtown shoppers.

VST has not been readily accepted by all. John Mann, a local anti-government zealot who has been fighting the city over licensing regulations, filed a lawsuit alleging harassment of his downtown coffee shop. The all-nude Show It dance club has also filed suit, alleging cameras were positioned to videotape their

customers, causing a 50% reduction in business. The local media has played up the "Big Brother" fear even though they are well aware that both claims were unfounded.

Even though the media and a few anti-government zealots protested, the community was not opposed to the initial site selections or intended use. Congested intersections, downtown locations, and utility sites were an "easy sell." Bakersfield, as well as other California cities, is enjoying the highest citizen approval ratings in over 10 years. The "Big Brother" concern that was anticipated for VST never developed due to our improved image.

Community input has been a significant factor in addressing the VST criteria issues of site selection and enforcement policies. Some of the resources that have nearly tripled in the last 10 years to combat drug abuse have been used to install new VST equipment in drug "hot spots."

The rather aggressive posture of the Bakersfield Police Department and other agencies in the state to implement VST at Senior Citizen Centers and locations of high juvenile crime, were major factors in the failure of a Senate bill to mandate VST. Local control of VST is critical both in terms of funding and setting priorities for its use.

POLICY CONSIDERATIONS

The selected scenario to be further developed is the normative scenario. The normative scenario depicts a future where VST has been implemented and is successful.

Policies have been developed to either increase the probability of helpful events occurring or decreasing the probability of detrimental events from occurring.

The policies were developed by consensus of Panel 3. All of the data gathered, trend and event evaluation, cross impact analysis, and scenario development were considered in the development of the following policies.

POLICY: Develop a law enforcement political strategy for the Bakersfield area that informs, advertises, promotes, and enlists support for a local public safety tax. Establishing some form of minimum financing of law enforcement will be necessary to stave off potential layoffs of police officers. Secure resources will also enable new tactics such as VST an opportunity to be tried.

POLICY: Initiate studies of alternative policing styles, particularly community based policing. Allow the findings to be implemented in pilot areas to gage its applicability to Bakersfield. Steps such as these would facilitate the anticipated change in philosophy in Bakersfield from command and control to community based policing. The use of VST would require its justification as a supporting element of community based policing.

POLICY: Develop an intensive public relations program. Public relations for most police agencies is based on maintaining the current level of confidence the community has in the agency.

The new program should mimic the private sector's promotion of itself. Promoting high standards, training, education, and technological capabilities of the agency will enhance the community's perception of law enforcement.

POLICY: Develop formalized citizen/law enforcement committees tasked with addressing mutual concerns. A few such joint task forces exist presently, such as the Black Liaison Committee. Many groups such as Hispanics, Senior Citizens, and others have no forum to discuss "their" mutual concerns. This more open, non-secretive format will be the floorplan for a citizen/law enforcement task force on VST. In this format issues such as VST site selection and enforcement policies could be discussed to achieve maximum citizen support.

The future most desirable has been described in the normative scenario. That scenario will be used in the next major phase of the study, development of a strategic plan. The strategic plan will address the adjustments law enforcement must make to insure that VST has an opportunity to demonstrate its usefulness.

To provide a framework in which the strategic plan can be implemented, the Bakersfield Police Department will be used as the example mid-sized California police agency. The Bakersfield Police Department is not currently using VST.

STRATEGIC PLAN

ENVIRONMENT

The Bakersfield Police Department is a mid-sized municipal police agency located in the southern San Joaquin Valley, Bakersfield, California. The city has a population of 182,000 policed by 249 sworn officers. Total compliment of police staff, sworn and non-sworn is 320. The city has over 102 square miles of jurisdiction, making it the 5th largest in the state. The city ranks 13th in terms of population.

Bakersfield has an oil and agriculture based economy with light industry beginning to increase. Cheap land and room for growth has made Bakersfield a city of phenomenal growth in the last decade. From 1980 to 1990 the population percentage gain was 65.63%. The city has evolved from a rural farming community into a metropolitan urban center with the same problems of other urban cities.

MISSION STATEMENT

The overall values and philosophy of the police department must be considered when developing a strategic plan about VST. In the "macro" sense the mission statement remains the same. In the "micro" sense VST needs to be included since it is policing in a new fashion.

MACRO MISSION STATEMENT

The Bakersfield Police Department is committed to providing service fairly, impartially, and in a courteous manner throughout

the entire community, and to remaining proactive in anticipating the future policing needs of the community.

The Bakersfield Police Department believes crime prevention is one of its primary goals.

MICRO MISSION STATEMENT (Developed by consensus of Panel 5)

The Bakersfield Police Department believes that the use of visual surveillance technology is a significant law enforcement tool that will deter crime, interdict crime, and enhance manned patrols.

The Bakersfield Police Department is committed to increasing community awareness of police operations, including visual surveillance technology so that the community can better understand the capabilities and limitations of the department.

SITUATIONAL ANALYSIS

Prior to the development of the strategic plan, a situational analysis of the Bakersfield Police Department on the issue and selected normative scenario was completed. The technique used to do the analysis is called WOTS-UP. WOTS-UP is an acronym for Weaknesses, Opportunities, Threats, and Strengths Underlying Planning. Weaknesses and strengths are assessments of the internal organization. Opportunities and threats are an assessment of the environment external to the agency.

Panel 4, a group of three experienced law enforcement practitioners within the agency (Appendix A), developed the data in a consensus format.

The findings of the WOTS-UP Panel were limited to those considered "very significant " to the issue and mission statement.

ENVIRONMENTAL OPPORTUNITIES

- Crime continues to be one of Bakersfield's primary public concerns. Some new tactics or technologies have been introduced in addressing crime and with each new tactic, technology becomes more acceptable as a means of confronting the crime problem.

- Local senior groups such as the 60 Plus Club at the local university are becoming more active and demanding increased protection and service.

- Bakersfield is one of the fastest growing cities in California. Developer fees could be used to support the costs of implementing VST in the new developments.

- Local politicians are asking for new approaches to deal specifically with youth crime and gangs. VST could be offered as a method of monitoring local "hot spots" of gang activity.

- The Bakersfield Police Department is located in the southern San Joaquin Valley where support and trust of law enforcement is high.

ENVIRONMENTAL THREATS

- The public's perception and trust of law enforcement was damaged severely by the "Rodney King" incident in Los Angeles. Citizen complaints at the Bakersfield Police Department have increased significantly since then, particularly from the black community. Decreased "trust" of law enforcement could jeopardize the potential use of VST.

- Many other advanced technologies are competing for the Bakersfield law enforcement dollar. Economic constraint in government spending is a reality, and VST will have stiff competition for the technology dollar. Computer vendors have made impressive proposals on a records management and crime analysis system.

- Political action groups such as the Bakersfield anti-abortionists would likely complain violation of their amendment rights, particularly if the system was used at locations of protests.

- The police department has a tenuous relationship with the media. Perceptions of the public can be affected by media positions taken on the issue. The media will also be critical in terms of educating the community about the capabilities, strengths, and limitations of VST.

ORGANIZATIONAL STRENGTHS

- The police department has proactive leadership supportive of trying new methods of providing service.

- The police department has substantial drug asset forfeiture monies that could be utilized to purchase VST equipment and train personnel in its use.

- The police department has developed strong, positive relationships with community groups, particularly the black community. The relationships would be crucial in educating the special interest groups about VST. Community input on use criteria could also be achieved.

ORGANIZATIONAL WEAKNESSES

- The police department has lagged behind other agencies in computer technology and is in the process of catching up. This means there will be stiff competition for funding.

- Although the police department has shown great innovation in new programs for service delivery, most have been manpower based, not technology based. Lack of experience could be a weakness.

- A recent organizational change moved the Radio Communications Division out of the police domain and into the Public Works Division. That division has most of the technical expertise needed to implement VST. The shift

in authority over the Radio Communications Division diminishes agency control and influence over their work priorities.

INTERNAL CAPABILITY ANALYSIS

The Bakersfield Police Department's internal capability was further analyzed by Panel 4 using a survey. The survey asked the employees to rate the department in a variety of categories. The scale of the first instrument measured the agency's "strategic needs capability." The strategic need area was identified as the department's ability to implement a VST program. The second instrument measured the agency's "receptiveness to change." Below are the significant findings of the surveys.

STRATEGIC NEEDS CAPABILITY: In some of the most critical areas the department rated "better than average." The first noted is in the area of money. Fiscal management of city resources has been very conservative and prudent over the last 20 years. Added to this is a substantial drug asset forfeiture fund. The second critical area is in the area of "management skills/training." Along with the resources to implement the program the agency appears to have the talented personnel to make it work. Finally, any program to be successful must have the support of the community and of the line personnel. The ratings indicate better than average "community support" and better than average "morale." An area that must be improved upon is the level of "media cooperation." It would enhance the marketability of VST with that improvement.

RECEPTIVENESS TO CHANGE: The single most significant aspect of this survey is that the "power structure" is strategically oriented to seek change in the issue area. The top and middle management are in categories that would be helpful or cooperative. The people that make things happen in the organization are strategically oriented for proactive measures that improve efficiency. The single most significant detriment was the organization's low rating of incentives to change. In 1991 the City of Bakersfield was one of the few cities that actually had a legitimate decrease in its overall crime rate. The power structure bent towards proactive measures will have to overcome the colloquial thinking of "if it isn't broke, don't fix it."

The median results of the data collected follows on the next two pages.

Internal Capability Analysis

Strategic Needs Capability

Strategic need area: Dept.'s Ability to Implement a VST Program

CATEGORY	RATING* Superior	Better	Average	Improve	Crisis
Manpower			X		
Technology		X			
Organization Structure		X			
Money				X	
Workload			X		
Officer/Citizen Ratio		X			
Turnover		X			
Management Skills		X			
"People" Skills			X		
Technical Training			X		
Management Training			X		
Public Image of Agency		X			
Community Support		X			
City Council Support			X		
City Manager				X	
Management Flexibility			X		
Morale			X		
Media Cooperation				X	

LEGEND
SUPERIOR: Better than anyone else. Beyond present needs.
BETTER: Better than average. Suitable performance. No problems.
AVERAGE: Acceptable. Equal to other agencies. Not good, not bad.
IMPROVE: Not as good as it should be. Deteriorating. Must be improved
CRISIS: Real cause for concern. Situation bad, action must be taken at once

*Median Rating of Panel 4

(N=3)

Internal Capability Analysis

Receptiveness to Change Analysis

Category	RATING* I	II	III	IV	V
TOP MANAGERS					
Mentality/Personality				X	
Skills/Talent			X		
Knowledge/Education				X	
ORGANIZATION CLIMATE					
Culture/Norms		X			
Incentives to Change				X	
Power Structure				X	
ORGANIZATION COMPETENCE					
Middle Management				X	
Supervisory			X		
Line Personnel		X			

LEGEND

I Custodial, rejects change
II Adapts to minor change
III Seeks a familiar change
IV Strategically oriented, seeks change related to the issue area
V Flexible, seeks novel change

*Median Rating of Panel 4 (N=3)

STRATEGIC ASSUMPTION SURFACING TECHNIQUE (SAST)

The next analysis prior to exploring different strategies includes identifying the most important stakeholders and the basic assumptions they would have about the issue. Stakeholders are key persons or groups, private or public, that will likely impact or be impacted by the implementation of the mission statement. Following the list of stakeholders and their assumptions is a Stakeholder Assumption Mapping Graph. The graph, divided into quadrants, depicts the certainty/uncertainty and importance/unimportance of the different stakeholder assumptions about the issue. The significant findings are below the graph.

Two colleagues, Lieutenant Ray Greagrey and Lieutenant Allen Brown, along with the author, identified as Panel 5 (Appendix A), were used to develop this consensus information.

1. Police Department
   - A. Wants to use this technology to prevent and interdict crimes.
   - B. Wants control of the use of the technology.
   - C. Does not want the technology to reduce staffing levels.
   - D. Maintenance of visual; records will be burdensome.

2. Courts
   - A. Fear constitutional challenges would further burden the judicial system.

B. Hope many other cases will be plead out when defendants are faced with a visual recordation of their crime.

3. Crime Victim Groups

A. Would support new measures that prevent crimes.

B. Would be concerned that video policing would reduce officer levels and no real gains in citizen protection would be made.

C. Would want access to visual records that support their cause.

4. Technology Vendor

A. Since use of this technology in the public setting would virtually be a first, excellent support and service could be expected.

B. Will leave justifications and policy decisions completely in the hands of the agency.

5. Media

A. Will exploit and sensationalize the controversy of such technology.

B. Will want access to visual records as public information.

6. Defense Attorneys

A. Will oppose the use of the technology on constitutional grounds and will challenge its reliability and accuracy.

B. Will litigate every aspect of the technology much the way drunk driving cases are litigated.

7. Merchant Associations

   A. Will generally support the use of the technology.

   B. Will demand systems be placed to their advantage.

8. Neighborhood Watch

   A. Would strongly support the use of the technology.

   B. Would prefer and emphasis in the residential areas.

   C. Would likely expect service for their neighborhood by virtue of their involvement level on crime prevention.

9. Minority Groups

   A. Political minority groups would oppose the use of the technology, fearing police oppression of their members and causes.

   B. Neighborhood minority groups would fear and oppose its use based on their existing fear and distrust of the police.

   C. That funds spent on the technology would better be spent in service areas related to the disadvantaged.

10. Police Officer Association

   A. Monies allocated to this technology could better be spent on increased staffing and benefits.

   B. Will lobby the City Council in opposition in fear of staff reductions.

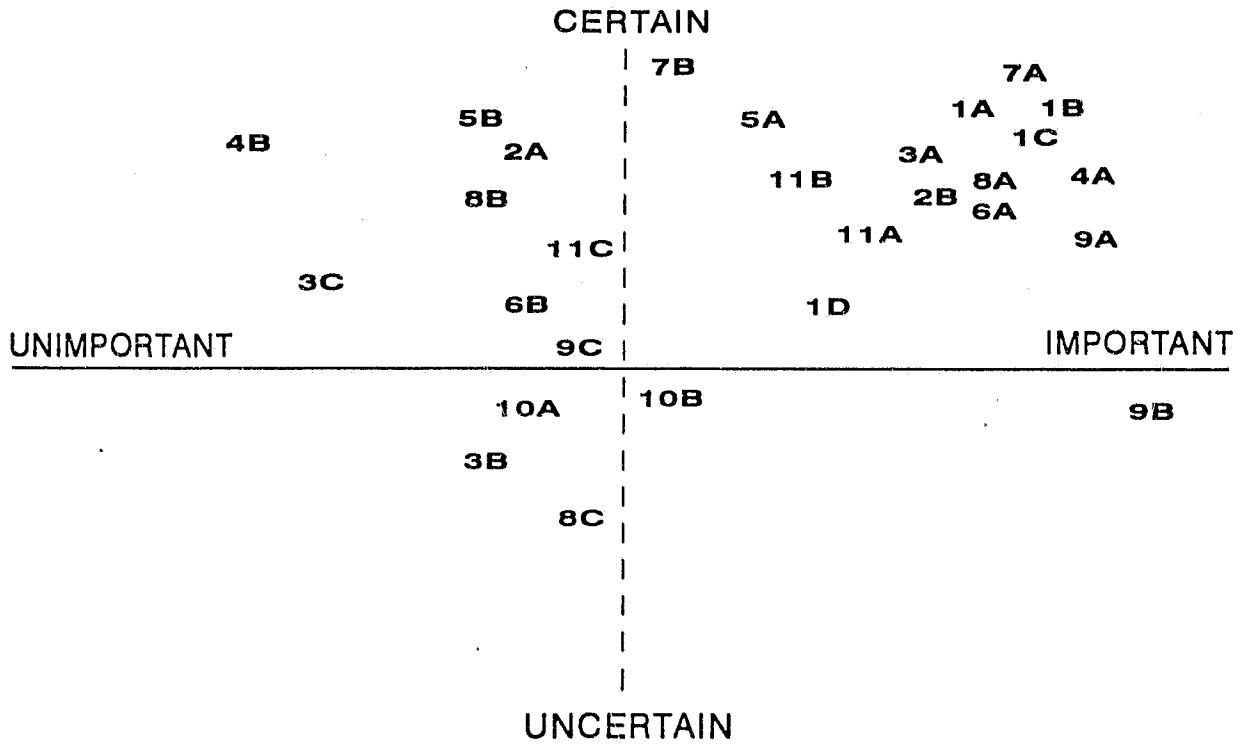
11. City Council

   A. Will assume police department has prepared the political acceptance path and mitigated the opposition.

B. Will view the technology in its fiscal terms, how much will it cost?

C. Will expect demonstrable crime reduction to confirm their "correct" decision maintaining voter support.

STAKEHOLDER ASSUMPTION MAPPING GRAPH



Legend: The numbers identify the stakeholders and the letters identify the assumptions previously discussed.

1. Police Department
2. Courts
3. Crime Victim Groups
4. Technology Vendor
5. Media
6. Defense Attorneys
7. Merchant Assoc.
8. Neighborhood Watch
9. Minority Groups
10. Police Officer Assoc.
11. City Council

The Stakeholder Assumption Mapping Graph confirms the intent of the police department to control the implementation and use of VST. It is also clear that the police department does not want VST at the expense of staff reductions.

The merchant association which will likely be a major driving force towards implementation is looking at VST from a business standpoint, that of increased security for shoppers. With their support will come special demands for service.

The city council, being political by nature is sure to want all of the political obstacles mitigated to make their support safe in terms of voter support.

The minority groups assumptions which are negative to the program are divided into 3 quadrants. The most important, fear of police oppression, is in the certain and important quadrant. Because of the city council's political sensitivity to the minority community, this opposition needs to be mitigated in some fashion.

These 4 stakeholders assumptions were viewed as the most important towards implementation or non-implementation of VST.

ALTERNATIVE STRATEGIES

The next phase of study was to develop a list of alternative strategies/policies that could accomplish the mission of introducing and using VST in Bakersfield. Once alternative choices were available each was evaluated allowing the selection of a preferred strategy or strategies. The process used to develop, evaluate, and select a strategy is a Modified Policy Delphi. Three police managers and supervisors, Panel 4 (Appendix A), were used to complete the Modified Policy Delphi.

CANDIDATE POLICIES

1. The police department introduces VST to Bakersfield in a small pilot program at a city owned downtown parking structure. This site would generate little controversy due to recent demands for increased security after a rape attempt. The parking structure is patronized by many working females whose companies have been pressuring the police department for more security.

2. Allow private security companies to bid for a VST contract with the city. The private security companies could man the monitors much the way they handle alarms. The police department would be called if criminal activity was viewed. This would be a contracted service the city would pay for.

3. Require by city regulation that developers install fiber optic cable hook-ups in all new commercial and residential developments. If raw land is being developed, require developers to install fiber optic cable in roadways. This allows the most costly aspect of VST to be borne by developers.

4. Propose implementation in the most crime and violence ridden neighborhood in the city. Implementation by the greatest need; a neighborhood plagued by drug and gang crimes, and a neighborhood that generates the most complaints by citizens against officers.

5. Utilize a marketing firm to develop a media blitz aimed at garnering community support for a new law enforcement tool. The firm would also be responsible for publicly communicating the capabilities and limitations of VST.

6. Organize a government/citizen task force responsible for identifying key players, affording public input, vendor selection, policy and procedure oversight.

7. Develop VST as a revenue generating resource. Allow the police department to sell a combined alarm/VST service to businesses for a profit.

8. Negotiate with insurance companies to provide reduced rates to homeowners and businesses serviced by VST. The reduced rates could be transferred to the property owners as a fee for the service. The property owner and insurance company would be bearing the cost of the service.

9. Develop a new civilian department to operate VST. That public agency would report criminal activity to the police department for response. The agency would be overseen by a citizen VST board.

The author of each policy was asked to discuss the merits of their policy in terms of what the likely support and opposition would be and how feasible they believed the policy was. After

discussion the Panel members were given a Modified Policy Delphi Rating Form on which they provided a numerical rating of the feasibility and desirability of each of the candidate policies. The rating form is depicted on the following page. After the rating form the results are presented in a table format with the candidate policies rank ordered.

MODIFIED POLICY DELPHI RATING FORM

Alternative 1: _____

*Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	Total _____
*Desirability	VD (3)	D (2)	U (1)	VU (0)	Total _____ Score _____

Etc. Through all 13 Policy Alternatives

Feasibility:	Definitely Feasible (DF)	No hindrance to implementation No research & development required No political roadblocks Acceptable to the public Acceptable to the stakeholders
	Possibly Feasible (PF)	Indication this can be implemented Some R & D still required Further consideration to be given to political or public reaction
	Possibly Infeasible (PI)	Some indication it is unworkable Significant unanswered questions
	Definitely Infeasible (DI)	All indications are negative, unworkable and cannot be implemented
Desirability:	Very Desirable (VD)	Will have a positive effect and little or no negative effect Extremely beneficial to the Department Acceptable to the public
	Desirable (D)	Will have a positive effect, negative effects are minor Justifiable as a by-product or in conjunction with other items
	Undesirable (U)	Will have a negative effect or be harmful May be justified only as a by-product of a very desirable item
	Very Undesirable (VU)	Will have a major negative effect, extremely harmful, will impede the strategic plan

Modified Policy Delphi Results (N=7)

Policy Alternatives	Rank	Feasibility	Desirability	Total*
Pilot Program	2	19	20	39
Private Security VST	8	6	2	8
Developers to Pay for VST	6	7	12	19
VST in High Crime Neighborhood	4	7	17	24
Marketing Firm to Introduce VST	5	12	8	20
Government/Citizen Task Force	1	19	21	40
VST to Compete with Private Alarm Companies	7	2	15	17
Negotiate with Insurance Company	3	15	20	35
Create New Civilian VST Agency	9	6	0	6

*Total Possible Points = 42

The top ranked policies are:

1. Organize a government/citizen task force responsible for identifying key players, affording public input, vendor selection, policy and procedure oversight.

2. The police department introduces VST to Bakersfield in a small pilot program at city owned downtown parking structure.

3. Negotiate with insurance companies to provide reduced rates to homeowners and businesses serviced by VST.

In further discussion of the top 3 ranked policies, MPD Panel members felt that policy 3 (negotiate with insurance companies) could easily and appropriately be included within the task force responsibilities. Therefore the selected strategies are organizing a government/citizen task force and the police department introducing a small pilot program. Panel members felt these two policies complimented one another and offered the most realistic approach to introducing VST to Bakersfield.

PILOT PROGRAM

The pilot program strategy would be a very feasible start in the use of VST. The pilot site is a multi-story downtown parking structure owned by the city. It is primarily used by downtown office and business workers, mostly female. The area is within two blocks of a Greyhound bus depot and usually has a number of undesirable transient types loitering in the area. There have been some thefts from vehicles, a few assaults, and most recently, an attempt rape. The site is within 4 blocks of the police department which would minimize costs of fiber optic cable. Downtown businesses and the media have called on the police department to provide more security.

The different stakeholders, particularly the political ones, could easily overcome any criticism of "Big Brotherism" considering the reasons for installing the system, protecting females from attack.

The scale of this pilot program would be so small that existing staff could be used to monitor the site.

Disadvantages of a pilot program with such a limited scope includes the fact that it will be difficult to measure the impact of the system since the criminal activity is so infrequent at the site. It is a program that adds additional workload and responsibility without additional staffing.

The primary law enforcement stakeholders will be supportive of this type pilot program. The stakeholders that might oppose such a system in their neighborhood would not likely oppose a site designed to protect women.

GOVERNMENT/CITIZEN TASK FORCE

Openness with the community regarding a project such as VST will be critical in maintaining trust and reducing fear. The police department, while being well supported by the community, lacks in its image of being open and accessible. The use of inter-department representatives (City Attorney, Risk Manager, Communications Director) with 7 citizens appointed by their ward councilperson, along with the police department VST Project Director, would be a major step in assuring the major stakeholders supporting the mission of implementing VST in Bakersfield.

Other advantages include: the program is directly controlled by the agency that will utilize the information; training of the program staff would be consistent with police standards; citizens have a major role in adopting site and use policies; political representation is assured; and standards adopted by such a task force would have "community" status.

Some of the disadvantages of this strategy include: another level of bureaucracy is created when citizens are trying to reduce

government; funding for the program is not secured which would probably mean using asset forfeiture funds; political agendas could be brought to the table when establishing policies due to the citizen appointment process; "Big Brotherism" may still be a factor proffered by the media and defense attorneys.

Given the very sensitive political nature and trust of government factors in implementing VST in the City of Bakersfield the government/citizen task force concept is the best strategy for developing more than a pilot program.

PREFERRED STRATEGY

The preferred strategies consist of first implementing a pilot program that will introduce VST to Bakersfield in a very positive and citizen safety conscious way. Then, to further expand the use of VST to need-driven sites, a government/citizen task force would be formed. The task force would be charged with educating the public about the capabilities and limitations of the system. They would also be responsible for assuring the public that their constitutional rights are being protected not invaded. This combination strategy accommodates the widest variety of stakeholders while generating the least amount of controversy. The police department maintains control of the information produced by the program for efficient law enforcement tactics, and the community has an authoritative voice in the policies and procedures of the program.

The task force concept will provide an appropriate forum to deal with the sub-issues as they arise. "Big Brotherism" can be dealt with in an educational, non-secretive manner through the task

force. Criteria issues such as site selection and enforcement policies can be decided in a citizen/law enforcement partnership format. The task force mechanism would also be used as the VST program is pushed into new markets. The preferred strategy has been designed to accommodate concerns and input from the community when VST is offered as a profit making service to both the business and residential alarm/security markets. The potential profitable markets for VST, (business/residential), would be addressed by the task force in the latter portion of the implementation schedule as shown in the next section.

STRATEGY IMPLEMENTATION PLAN

The implementation plan is a general guideline based on a time line. It establishes for the orderly and sequential progress of the steps necessary to accomplish the "micro mission statement."

Phase I (Internal) 1-3 months

- Secure support of Chief of Police and other significant personnel to implement program
- Inform the officer association and secure their support if possible
- Select Project Director
- Assess internal strengths/weaknesses, identify management structure to implement program
- Develop commitment from critical personnel
- Identify resource requirements, training personnel, number of personnel required, and funding

Phase II (External) 1-3 months

- Identify important stakeholders, inform, and gain support if possible
- Identify potential external resources, federal grants, merchant associations, and insurance companies
- Identify alternative vendors and pre-select best vendor for the program

Phase III (Structure the Pilot Program) 1-3 months

- Select site (downtown parking structure)
- Select vendor, establish cost of program
- Secure funding, initial funding from asset forfeiture monies
- Involve media in final plans of pilot program, emphasize security issues
- Establish time line for construction and operational date
- Identify the method and time frame of assessment of the program's success or lack thereof
- Identify personnel responsible for the day to day operation of the program, establish training program for VST

Phase IV (Implement Pilot Program) 1-3 months

- Assign personnel responsibilities in program
- Establish "on line" date and involve the media and other stakeholders in demonstrations of the system
- Project Director to provide scheduled assessments to Chief of Police, and highlight successes to media

- Project Director to insure vendor is meeting all obligations
- Project Director to provide 6 month evaluation of the pilot program that will serve as the springboard for the next expanded phase

Phase V (Structure the Task Force for Expanded Implementation) 24 months

- Project Director submits proposal for expansion and the formation of the task force to assist in expansion
- Secure approval of Chief of Police, City Manager, and City Council
- Task force selected, establishes its goals and objectives for the program
- Task force develops alternative levels of implementation based on varying funding levels
- Task force identifies alternative vendors for expanded program, selects best vendor
- Project Director identifies internal resource requirements, personnel, equipment, training
- Task force works to secure acceptance and approval of external stakeholders including the media
- Task force establishes schedule of implementation
- Task force establishes policies for use
- Task force establishes criteria for site selection
- Task force establishes criteria for enforcement
- Project Director establishes departmental procedures

Phase VI (Major City Intersections and Important Government Facilities Provided With VST Service) 24 months

- Vendor selected and all necessary equipment is ordered
- Equipment is installed and tested
- Personnel trained
- Demonstrations for stakeholders including the media
- Equipment goes on line, vendor to meet all spec and service requirements
- Project Director solicits feedback from personnel and community, makes appropriate procedure changes and advises task force if any policies need to be modified

Phase VII (Develop the Business Market for Police VST as a Service and as a Profit Making Business for the City of Bakersfield, Repeat Steps of Phase VI) 36 months

Phase VIII (Develop the Residential Market for Police VST as a Service and as a Profit Making Business for the City of Bakersfield, Repeat Steps of Phase VI) 36 months

Phase IX (Evaluation - on-going)

- Quarterly written reports required of the Project Director, submitted to the Chief of Police and the task force
- Review training program and modify as necessary
- Develop additional sites for implementation, submit to the task force for prioritization

The implementation schedule should be completed in ten years. The next portion of the study deals with transition management.

TRANSITION MANAGEMENT

TRANSITION MANAGEMENT OVERVIEW

A desired future state has been identified in the normative scenario; a strategy, mission statement, and implementation plan have been developed. Stakeholders, those people or groups that could have an impact on the issue, have also been identified.

The next phase is developing a plan to manage the change from current status to the desired future state. That is the transition management plan.

The transition strategy is three part. First is the identification of the "critical mass." The critical mass are those individuals who provide the initiative and commitment to the VST concept that actually make it happen. Each critical mass player will be identified and a discussion follows of their current commitment level, the commitment level needed, and the significant areas of "responsibility" each has.

The second part is a discussion of the "management structure" that would be the most appropriate during the transition.

Part three is a discussion about different "implementation technologies." These are selected methods that can be used by the critical mass to overcome resistance or to secure support for the desired change.

Following "Transition Management Structure" is a "Commitment Level Chart" that depicts the commitment level of the critical mass and the direction each needs to be changed.

A "Responsibility Chart" is also provided that depicts the type of responsibility each critical mass player has for different decisions or acts in the overall implementation of VST.

CRITICAL MASS: COMMITMENT AND RESPONSIBILITY

CHIEF OF POLICE: The Chief of Police is currently in the "let it happen" category. Due to the chief's real power base as one of the key department heads and his traditional role as a community leader, he needs to be in the "make it happen category." His influence on the other players and stakeholders make it important that he promotes the program from the "make it happen" position.

The Administration Lieutenant, whose interest level in VST is high, is the appropriate person to induce this change. To encourage the shift in categories the Administration Lieutenant should supply research data, plans of action, educational information, and preliminary assessments of both support and resistance. He could facilitate vendor demonstrations, community meetings and media relations. Motivation for the Chief to change positions would come from the desire to improve officer efficiency and citizen safety.

Once moved into the "make it happen" category, the Chief would assume much of the oversight responsibility of the program, including policy development, funding, vendor selection, and evaluating the success or failure of VST. He would also be the approving authority for the operational aspects of the program such as, program design, program implementation, and monitoring the program.

CITY MANAGER: The City Manager has traditionally been very supportive of police department projects. Recent successes, such as the vehicle take home program, have demonstrated the agency's ability to improve service with minimal costs. The City Manager is

the critical link with the political body, the City Council, and has the ability to encourage support or non-support of the project. For these reasons his commitment level needs to be moved from its current position of "let it happen" to the "help it happen" category.

The Chief of Police, armed with a well prepared strategic plan, should help move the commitment level of the City Manager. Efficiency, citizen security, and an improved image for some struggling sections of the city would be the motivational factors.

The City Manager's role in the program would primarily be that of an approving authority. Most of the program facets involve funding issues that the City Manager must approve. One area of responsibility the City Manager should assume is that of presenting the concept of a task force to the City Council. The task force concept of selecting citizen appointees from respective council wards would be a political issue for which the City Manager should assume responsibility.

COUNCILMAN A: This councilman is presently in the "block" category and needs to be moved to the "let it happen" category. He is a multi-term councilperson that espouses a platform of reduced government intervention. He has neither been a strong advocate nor foe of past police department proposals. He does at times take extreme views as compared to other council members and therefore attracts media attention. He would be the potential "noisemaker" about the proposal if his support could not be obtained.

The City Manager and the Chief of Police should use their combined influence and stature in the community to persuade

Councilman A to move into the "let it happen" category. Use of the attempt rape at the downtown parking structure example would be a powerful influence. Highlighting the technology's ability to add security for women like the one that was attacked would make it difficult to oppose.

The Councilman's responsibility would almost exclusively be the approval of funding and the overall goals and objectives of the program.

COUNCILMAN B: Councilman B is presently in the "let it happen" category and needs to be moved into the "help it happen" position. He has generally been supportive of police department proposals due to past successful programs and his confidence in the management team. He is very critical of all programs from a fiscal perspective. He is recognized for his ability to sift through plans and arrive at the bottom line costs and any unforeseen costs.

The Assistant Chief of Police is also recognized for his expertise in financial management and progressive approach to providing law enforcement service. Both men have a mutual respect for each others abilities. The Assistant Chief would be the appropriate person to approach Councilman B for support. One of the motivational factors for the Councilman to support the program is his desire to seek a higher elected position. Adding security features to the parking structure to defeat attackers of lone females would have a substantial publicity aspect.

The Councilman's responsibility would be the same as Councilman's A, that of approval.

ADMINISTRATION LIEUTENANT: The Administration Lieutenant is a 16 year veteran with all of his years of service dedicated to the Bakersfield Police Department. He has demonstrated the ability to handle complex tasks in the internal and external environment. He is currently in the "help it happen" category and should remain in this position. From this position he can provide the operational direction of the program. He is the likely candidate for the Program Director.

His responsibilities would include the operational aspects such as, program design, program implementation, and program monitoring.

The Administration Lieutenant views the VST program as an opportunity to extend the service level to the community and increase agency efficiency at the same time. He is the program's most vocal supporter and should be used in the salesmanship of the program.

TRANSITION MANAGEMENT STRUCTURE

The transition period for this proposal will require the Project Director to be intimately familiar with the day to day operations of the police organization. The project will also require approximately 2 years of concentrated effort. The Administration Lieutenant will be selected as the Project Director because of his familiarity and support of the proposal. He also works directly out of the Chief of Police office which allows for daily briefings and advise from the Chief of Police.

To insure that the Project Director is receiving feedback from the different levels of the organization impacted by VST, a

departmental advisory committee will be formed. A "diagonal slice" of the agency at various levels will be used to insure problems, suggestions, and recommendations reach the Project Director. The use of the "diagonal slice" advisory committee also increases the "buy in" of the effected personnel.

The Chief of Police is charged with the responsibility to "make it happen." That responsibility is primarily about his overt support of the proposal and his willingness to use his influence and position in the community to persuade other significant stakeholders to support the proposal. The Project Director is also charged with gaining support of the proposal within the police department and community.

Commitment Chart

KEY PLAYER	NO COMMITMENT	BLOCK	LET IT HAPPEN	HELP IT HAPPEN	MAKE IT HAPPEN
Chief of Police			X - -	- - - - - ▸	X
City Manager			X - -	▸ O	
Councilman A		X - -	▸ O		
Councilman B			X - -	▸ O	
Administration Lt.				X	

Developed By Consensus of Panel 5 (N=3)

X = Current Commitment O = Commitment Needed

IMPLEMENTATION TECHNOLOGIES

Change is stressful for all involved, including the agents of that change. The uncertainty of how individuals should respond to the change is a major part of that stress. Certain technologies can be used to clarify, to help people let go of the past, and to understand their role as it relates to the change. The following technologies would be appropriate and support the transition to the use of VST.

CONFRONTATION AND GOAL SETTING

The task force will be charged with providing clear direction for the use of VST. That direction would include site selection, enforcement parameters, and accessibility to the visual information. The Project Director, authorized by the Chief of Police to state the agency's position on these critical issues, should lead the goal setting and confrontations on these issues. This technique allows the Project Director to identify the direction or "vision" of the program.

Citizen members of the task force would have the opportunity of providing input on the goals and objectives of VST. This would add a measure of community wide "buy in" into the program while allowing the agency to control the "vision" of VST.

COMMUNITY MEETINGS

A high degree of citizen input of their concerns and desires can be achieved by holding community meetings on all stages of the proposal. These meetings would serve as an orientation for the

community on how VST will and will not effect them. Fears can be dealt with prior to implementation.

During the pilot stage the Project Director should speak to service clubs, church and civic organizations, and neighborhood watch meetings. After formation of the task force, community meetings could be attended by one government representative and one citizen (Council) representative.

CONFLICT MANAGEMENT

The diversity of the task force members and the difference of their views on VST will likely lead to conflict. Immediate ground rules need to be established for management of that conflict. Consensus problem solving would be an appropriate technique for the task force to use. A brief version of this method is:

1. Present your own position
2. Listen to the other position
3. Confront and explore disagreement
4. Resist easy authoritative or arbitrary devices to decide
5. Consider integrative solutions

MANAGING THE NEUTRAL ZONE

The neutral zone is the unique time frame when both the old and new overlap and individuals feel anxiety. It is the time when there is often a feeling of loss of direction. Citizens and police personnel will both be effected by this neutral zone when the surveillance technology is first implemented. The Project Director should use this technology in both community meetings and in

meetings with the "diagonal slice" advisory group. The following will help manage that anxiety:

1. Discuss the experience at all levels and in community meetings. Seeing others with the same anxieties lessens the feelings that you're alone in your feelings.
2. Recognize the "slump" that will occur during the transition.
3. Over communicate both information and concern.
4. Establish temporary rules during the transition.
5. Avoid other concurrent major changes if possible.
6. Stay focused on the goal.

RESPONSIBILITY CHARTING

The Project Director and the selected organization leaders that will be immersed in the preparation, presentation, adoption, and implementation of the VST project should utilize this technique to clarify their behavior. Charting each persons responsibility helps avoid duplication of effort and wasting of resources. It puts in a rather simple format who is responsible for doing what. This charting technique also helps each of program members gain status because of their responsibility and adds to their desire to each the established goals.

The Responsibility Chart is depicted on the following page.

RESPONSIBILITY (RASI) CHART

ACTORS

Decision or Acts	Chief of Police	City Manager	Council - man Salvaggio	Council - man McDermott	Admin. Lt.
Program Policy	R	A	A	A	S
Program Design	A	A	S	S	R
Implement Program	A	A	I	I	R
Monitor Program	A	I	I	I	R
Evaluate Program	R	A	A	A	S
Select Project Director	R	I	-	-	S
Funding	R	A	A	A	S
Vendor Selection	R	A	A	A	S
Task Force Approval	I	R	A	A	S
New Personnel	R	A	A	A	-

Developed By Consensus of Panel 5 (N=3)

Legend

R = RESPONSIBILITY for action (but not necessarily authority)
A = APPROVAL (must approve, has power to veto the action)
S = SUPPORT (must provide resources, but does not have to agree to the action)
I = INFORM (must be informed before action, but cannot veto)
BLANK = Irrelevant to that particular action

EVALUATION AND FEEDBACK LOOP

Computer aided dispatch (CAD) and a computerized records management system could be used to evaluate the program's success in the "hard" data areas such as number of crimes committed. To achieve public feedback a survey instrument would be appropriate. This technique allows the agency to use both internal and external information sources to make adjustments in the program if necessary.

CONCLUSIONS

Futurist Gene Stephens was concerned that the new high tech crime fighting may be a threat to our civil liberties. Listening devices that can record conversations through solid walls from miles away and video devices that can record images through walls and ceilings, projects a secretive and fearsome government.

On the other hand, video is in use daily in government and private industry, saving time and money. Court rooms around the country are conducting hearings and countless other judicial services via video technology. Government resources are scant. Urban problems including crime abound. Can the police find a way to implement VST in public areas without breaching the civil liberties Gene Stephens speaks of?

The VST issue and related issues of "Big Brotherism," where, and how, the technology is used was addressed by a Panel of experts in the Defining the Future section. The trends and events forecasted portrayed a future where resources would not match the demand for services. The probability that police officers would be laid off, due to budget constraints, first exceeds zero in only two years from now, 1994. Law enforcement has an image problem after Rodney King. The public's perception of law enforcement will slowly improve over the next 10 years. With these and other forecasts a future scenario was developed to reflect a positive implementation of VST.

To test this desired future scenario, it was examined in the context of a mid-sized police agency, the Bakersfield Police Department, California. Two polices of establishing a pilot

program and a government/citizen task force were combined into a single strategy. While developing the strategy stakeholders that could impact the program were assessed. An implementation plan was also developed to provide a framework to put the plan into action.

With the desired future mapped out in the strategic plan, the next phase was to deal with the actual change, the transition. The most critical players, including the police chief, the city manager, two different council members, and the administration lieutenant were assessed in terms of their commitment and responsibility levels. The chief of police being the most critical player as the leader that must be in the "make it happen" category. A variety of technologies were then outlined as being appropriate for the players to use to mitigate the problems that would arise with the change to VST.

Given the data forecasted, a number of factors point to a reasonable likelihood that VST will play a role in policing public locations in the next ten years. Whether or not agencies can overcome public fear and mistrust to include VST in more than a minimal pilot type program will depend on their ability to assess the environment and develop sound strategies. The strategy adopted in this study was one of high citizen involvement.

Are there other strategies that would eliminate citizen involvement and provide exclusive control to the police agency? The Panel assembled to develop candidate policies and the preferred policy discussed this police control mindset. The peculiar problem that could not be resolved was that of assuring the public that the VST was <u>not</u> being used in the Gene Stephens sense. Openness and

community based standards of use was what the government/citizen task force offered.

The non-secretive, open format was extended to the limit in Newark, New Jersey. This concern was so great that the kiosk housing the video monitors and recording equipment was placed on a busy downtown street corner. All who pass can see through the large windows exactly what the police officers are monitoring. For those agencies not accustomed to a high level of citizen input and oversight, additional questions must be asked about that transition.

The strategic and transition management plan addressed the sub-issues in the following way:

A. How will agencies manage the "Big Brother" concern of citizens?

Key players in the plan, the Chief of Police, and the Administration Lieutenant, using Community Meeting and Evaluation and Feedback Loop technologies, play an important role in minimizing this concern. The non-secretive, open format of the task force will also reduce this concern.

B. How will agencies manage the criteria issues raised, regarding such things as the acceptable level of surveillance and site selection?

In the initial development and implementation of VST in a pilot setting, and later some key municipal locations, the citizen/law enforcement task force would be utilized for these decisions. Because it would be a new law enforcement tactic for Bakersfield, citizen "buy in" would be critical from both a practical and political standpoint. If, as in the normative scenario, VST proves its usefulness and acceptability, it would be

expanded as a profit making service, offered by the police agency to both the business and residential markets. The criteria issues of site selection and levels of service then would be handled more in a "business" format.

C. How will agencies manage the enforcement issues raised by use of this technology?

The enforcement issues would be dealt with in a similar manner as the logistical issues discussed above. The task force would be used for citizen input, with the agency maintaining control of the day to day operations.

It is unfortunate that the events and trends that may influence police agencies to explore VST are generally a negative indictment on urban cities. The infra-structure has been stretched to its limit and so have the men and women facing the daily crime problems of urban cities. VST is not being touted as a solution, merely a new tool to enhance the capabilities of those men and women sworn to protect.

APPENDIX A

Panels

Panel 1 Futures Wheel

Ray Greagrey, Lieutenant, Bakersfield Police Department, 20 years law enforcement experience, Masters Degree.

Neil Mahan, Lieutenant, Bakersfield Police Department, 16 years law enforcement experience, Bachelors Degree.

Brad Wahl, Sergeant, Bakersfield Police Department, 12 years law enforcement experience, Bachelors Degree.

Panel 2 Futures Forecasting

Allen Brown, Lieutenant, Bakersfield Police Department, 16 years law enforcement experience, Bachelors Degree.

Steve Brummer, Assistant Chief, Bakersfield Police Department, 20 years law enforcement experience, Masters Degree.

Lauren Casselman-Frapwell, Certified Public Accountant, City Bakersfield, Audit Specialist, 12 years experience, Masters Degree.

Douglas Culhane, Assistant Dean of Students, South High School City of Bakersfield, 16 years experience, Masters Degree.

Terrye Flowers, Computer Systems Supervisor, City of Bakersfield, 12 years experience.

James M. Lewis, Assistant Chief, Bakersfield Police Department, 18 years law enforcement experience, Masters Degree.

Kevin Stokes, Sergeant, Bakersfield Police Department, 12 years law enforcement experience, Bachelors Degree.

Panel 3 Cross Impact Analysis

Ray Greagrey

Neil Mahan

Sid Unruh, Sergeant, Bakersfield Police Department, 18 years law enforcement experience.

Panel 4 WOTS UP

Ray Greagrey

Neil Mahan

Sid Unruh

Panel 5 S.A.S.T.

Allen Brown

Ray Greagrey

Neil Mahan

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