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REMARKS BY THE HONORABLE JAMES K. STEWART

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IPEC

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NOTE:
Because Mr. Stewart often speaks from notes, the speech as
delivered may vary from the text. However, he stands behind this
speech as printed.

THANK YOU, [   ].

[OTHER ACKNOWLEDGEMENTS]

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THE NATIONAL INSTITUTE OF JUSTICE HAS A LONG HISTORY OF

INVOLVEMENT IN TECHNICAL RESEARCH AND DEVELOPMENT FOR LAW

ENFORCEMENT. SOME OF OUR BEST-KNOWN DEVELOPMENTS ARE POLICE BODY

ARMOR (KEVLAR BULLET-PROOF VESTS HAVE SAVED OVER 1200 POLICE

LIVES IN THE U.S.) AND DOGS TRAINED TO DETECT NARCOTICS OR BOMBS.

WE OPERATE A TECHNOLOGY ASSESSMENT PROGRAM WHICH SERVES

POLICE DEPARTMENTS IN THE U.S. BY SETTING PERFORMANCE STANDARDS

AND TESTING EQUIPMENT. WE'RE CURRENTLY ABOUT TO BEGIN TESTING

VEHICLE TRACKING SYSTEMS, AND WE'RE DEVELOPING A STANDARD FOR

HOLSTERS AT THE REQUEST OF THE INDUSTRY. WE'VE PUBLISHED TEST

REPORTS ON AUTO-LOADING PISTOLS, REVOLVERS, AND SHOTGUNS; AND WE

PUT OUT AN ANNUAL REPORT ON MOTOR VEHICLES. MANY OF THE PRODUCTS

AND SERVICES ON DISPLAY HERE ARE ONES WHICH OUR TECHNOLOGY

ASSESSMENT PROGRAM HAS TESTED AND HELPED TO DEVELOP.

BUT NIJ IS ALSO DEEPLY INVOLVED IN R & D ON THE CUTTING

EDGE.

WE ARE ENTERING THE AGE OF THE HIGH-TECH DETECTIVE. THE

POLICE IN SOME AREAS ARE ALREADY USING ADVANCED TECHNOLOGIES THAT

INCLUDE LASERS, AUTOMATED FINGERPRINT SYSTEMS, GENETIC TESTING

AND RELIABLE DRUG TESTING.

THE POLICE NEED TO BECOME MORE TECHNOLOGICALLY

SOPHISTICATED, IF ONLY BECAUSE HIGH-TECH OFFERS SO MANY NEW

OPPORTUNITIES TO CRIMINALS. THE SOPHISTICATED ROBBER OF THE

FUTURE WILL USE A COMPUTER RATHER THAN A HANDGUN; INSTEAD OF

GOING THROUGH THE DOOR, HE'LL ENTER A BANK'S OR A CORPORATION'S

COMPUTER SYSTEM.

AND WE NEED TO BE PREPARED.

LONG BEFORE I CAME TO THE NATIONAL INSTITUTE OF JUSTICE, I

LEARNED EARLY ON -- AS A POLICE OFFICER IN OAKLAND -- HOW

VALUABLE COMPUTER SYSTEMS CAN BE IN DETECTIVE WORK. (DIGIT-COM)

THAT WAS ALMOST 20 YEARS AGO. AND FINALLY, THIS TECHNOLOGY

IS COMING INTO WIDER USE.

MY MESSAGE TODAY IS THAT WE NEED TO SUPPORT RESEARCH AND

DEVELOPMENT INTO ADVANCED TECHNOLOGY. WE NEED TO FOCUS IN A VERY

SPECIFIC WAY ON HOW THIS TECHNOLOGY CAN AID US IN POLICING. THE

POLICE REPRESENT A POTENTIALLY ENORMOUS AND VERY ATTRACTIVE

MARKET TO COMPUTER AND SOFTWARE MANUFACTURERS. BUT IT'S ALSO A

SPECIFIC MARKET. WE HAVE SPECIFIC NEEDS, WHICH AREN'T THE SAME

AS BUSINESS OR MILITARY APPLICATIONS. BUT IF WE'RE GOING TO GET

THE TECHNOLOGY TAILORED TO OUR OWN PURPOSES, IT MEANS POLICE

MANAGERS NEED TO (1) BECOME COMPUTER-LITERATE; AND (2) USE

COMPUTERS FOR PROBLEM-SOLVING AND CRIME ANALYSIS AND DETECTION --

NOT JUST AS ELECTRONIC MESSENGERS, A FASTER AND MORE CONVENIENT

WAY OF TRANSFERRING INFORMATION FROM ONE DESK TO ANOTHER. THERE

ARE FAR MORE CREATIVE APPLICATIONS FOR POLICING AND I'M GOING TO

BE TALKING ABOUT SOME OF THOSE TODAY -- APPLICATIONS THAT OFFER

US BETTER METHODS OF DETECTION AND BETTER POLICE MANAGEMENT.

IN THE U.S., DESPITE THE FACT THAT POLICE ARE BETTER

EDUCATED AND BETTER TRAINED TODAY THAN EVER BEFORE, OUR CLEARANCE

RATES HAVE BEEN FALLING. IN 1966, POLICE CLEARED 32% OF REPORTED

ROBBERIES; BY 1986, THAT WAS DOWN TO 25%. THE BURGLARY CLEARANCE

RATE DROPPED FROM 22% TO 14%. THE REASONS ARE THAT POLICE ARE

OVERBURDENED, AND THAT THE STANDARDS OF EVIDENCE HAVE BECOME

STRICTER, SO THAT IT TAKES A LOT MORE POLICE WORK TO PRODUCE THE

NECESSARY EVIDENCE. COMPUTER SYSTEMS COULD BE A TREMENDOUS BOON

IN SAVING POLICE TIME. AND IT'S NOT JUST A MATTER OF HAVING MORE

MAN-AND-WOMAN-HOURS AT OUR DISPOSAL. SAVING TIME MEANS BETTER

DETECTION, IF IT MEANS THAT RELEVANT INFORMATION IS MADE RAPIDLY

AVAILABLE TO THE CONSTABLE ON THE SCENE, OR CAN BE RAPIDLY

CONVEYED UP THE CHAIN OF COMMAND, SO THAT POLICE HAVE A GREATER

CHANCE OF MAKING AN ARREST WITHIN THE FIRST FEW HOURS.

NIJ IS CURRENTLY SUPPORTING AN EXPERIMENT IN COMPUTERIZED

POLICING IN ST. PETERSBURG, FLORIDA. IT'S THE FIRST CASE WE KNOW

OF WHERE POLICE ARE WORKING TOTALLY ELECTRONICALLY, WITHOUT

PUTTING ANYTHING ON PAPER. FROM THE NOTES TAKEN BY THE OFFICER

ON THE STREET ALL THE WAY UP TO FILING THE FBI UNIFORM CRIME

REPORT, EVERY PIECE OF INFORMATION THAT IS FILED IS ENTERED IN

THE COMPUTER. THE SYSTEM USES A CENTRAL COMPUTER AT POLICE

HEADQUARTERS TO PROCESS REPORTS THAT OFFICERS MAKE IN THE FIELD,

WITH HAND-HELD COMPUTERS ABOUT THE SIZE OF A NOTEBOOK.

THE SYSTEM IS CALLED PISTOL -- WHICH STANDS FOR "PAPERLESS

INFORMATION SYSTEM TOTALLY ON-LINE."   BY THE WAY, WE SPEAK OUR

OWN DIALECT OF ENGLISH IN WASHINGTON -- IT'S 75% ACRONYMS. ONE

OF THE MAJOR QUALIFICATIONS FOR A GOVERNMENT JOB IS YOUR ABILITY

TO INVENT ACRONYMS.

IN THE PISTOL PROJECT, STREET OFFICERS HAVE BEEN ABLE TO

ACCESS THE CENTRAL COMPUTER VIA RADIO OR TELEPHONE TO CHECK NAMES

AND DESCRIPTIONS; LICENSE PLATES OF SUSPECTED STOLEN AUTOS; AND

OBTAIN OTHER INFORMATION SUCH AS CITY ORDINANCES, STATUTES,

DEPARTMENTAL POLICES AND PROCEDURES, AND OTHER INFORMATION

CRITICAL TO GOOD STREET POLICE WORK. [CHIPS: CAN WE EXPLAIN HOW

IS THIS DIFFERENT FROM DIGIT-COM? I'M AFRAID THAT IF YOU DESCRIBE

PISTOL AND DIGIT-COM IN SIMILAR TERMS, PISTOL WILL SOUND

ANTI-CLIMACTIC.]

THIS ALMOST IMMEDIATE ACCESS TO INFORMATION THAT HAD

PREVIOUSLY BEEN LATENT IS EXPECTED TO HAVE A MAJOR IMPACT ON THE

FUTURE OF STREET POLICING.

WE HAVE TRADITIONALLY RELIED ON THE CONSTABLE ON THE SCENE

TO PROVIDE INFORMATION. THAT WILL CONTINUE. BUT COMPUTERIZATION

ENABLES US TO GET THAT INFORMATION ON LINE AS RAPIDLY AS

POSSIBLE. IN EFFECT, IT ENABLES THE CONSTABLE TO BECOME MORE

KNOWLEDGEABLE, MORE EFFICIENT, AND MORE COMPETENT.

AND OBVIOUSLY, THE LABOR-SAVING POTENTIAL IS ALSO

TREMENDOUS: THE ELIMINATION OF REDUNDANCY IN DATA ENTRY, AND THE

REDUCTION OF LABOR IN SORTING, FILING, AND DISTRIBUTING

INFORMATION.

THE PISTOL FIELD TEST IS JUST BEING COMPLETED THIS MONTH, SO

WE DON'T HAVE ANY FINAL RESULTS ANALYZED YET. BUT ONE BENEFIT

WE'VE OBSERVED ALREADY IS A MARKED INCREASE IN THE QUALITY OF THE

INFORMATION IN THE FREE-TEXT PART OF THE POLICE REPORT, NOW THAT

THE OFFICER HAS MORE FLEXIBILITY AND CONTROL, THE ABILITY TO ADD

SECOND THOUGHTS, AND REVISE EASILY.

ANOTHER NEW PROGRAM THAT WE'RE TESTING IS COMPUTERIZED

MAPPING OF CRIMES. LIKE THE PISTOL PROJECT, THE EFFECT OF THIS

PROGRAM IS TO EMPOWER THE INDIVIDUAL OFFICER. IT HAS A

DECENTRALIZING EFFECT. IT FUNNELS INFORMATION DOWNWARD AND

OUTWARD, PUTTING IT INTO THE HANDS OF THE INDIVIDUAL OFFICER ON

HIS BEAT AND INCREASING HIS CHANCES OF BEING PROACTIVE.

TRADITIONAL POLICE WORK HAS LONG INVOLVED THE USE OF PIN

MAPS TO LOCATE CRIMES. AND FOR GOOD REASON: MOST OF US HAVE

MINDS THAT WORK BETTER, REMEMBER MORE EASILY, AND INCORPORATE

MORE INFORMATION, IF WE CAN SEE A PICTURE RATHER READ A LIST OF

ITEMS. BUT THE PROBLEM WITH PIN MAPS IS THAT THEY ARE

CENTRALIZED (AVAILABLE TO THE COMMANDER AT THE STATION, BUT NOT

TO THE OFFICER ON HIS BEAT) AND THEY AREN'T CURRENT.

SO NIJ AWARDED A GRANT TO THE CHICAGO POLICE DEPARTMENT --

WHICH WILL BE COMPLETED NEXT MONTH -- TO BRING MAPPING UP TO THE

MINUTE BY COMPUTERIZING IT. COMPUTERIZATION ALLOWS THE PIN-MAP

TO BE QUICKLY UPDATED, SO IT IS ESSENTIALLY A REAL-TIME MAP.

AND IT CAN BE PUT INTO THE HANDS OF EVERY OFFICER (VIA PERSONAL

COMPUTERS).

THIS COULD BE REVOLUTIONARY FOR LARGE POLICE DEPARTMENTS. IT

MEANS THAT BEAT OFFICERS COULD FIND OUT WHAT HAPPENED ON THEIR

BEATS DURING THE SIXTEEN HOURS A DAY THAT THEY WERE NOT ON DUTY,

AND ON THEIR DAYS OFF. IN MOST LARGE DEPARTMENTS, THERE IS NO

ROUTINIZED MEANS OF TRANSFERRING INFORMATION FROM OFFICER TO

OFFICER WHEN THEY PATROL THE SAME BEAT.

INTERESTING PATTERNS SHOW UP. FOR INSTANCE, MAPPING POINTED

UP ONE AVENUE IN CHICAGO THAT HAD A HIGH LEVEL OF RETAIL BURGLARY

AND ARMED ROBBERY. WHEN THEY ANALYZED IT, IT TURNED OUT THAT

THIS STREET WAS ON THE EDGE OF THREE DIFFERENT BEATS. IT WAS A

BORDERLINE, AND IT WAS LESS PATROLLED THAN OTHER STREETS WITHIN

THOSE BEATS.

BUT THE MAPPING PROJECT IN CHICAGO HAS TAKEN A SIGNIFICANT

STEP BEYOND PUTTING UP-TO-THE-MINUTE CRIME MAPS INTO THE HANDS OF

EACH OFFICER. IT HAS ALSO MADE MAPS AVAILABLE TO COMMUNITY

GROUPS.

AND IN ADDITION TO MAPPING CRIMES, IT MAPS THE TYPES OF

INCIDENTS THAT ARE OFTEN THE PRELUDE TO RISING CRIME, SUCH AS

PUBLIC DISORDER, INCIVILITIES, AND OTHER SIGNS OF NEIGHBORHOOD

DETERIORATION. IN SHORT, HIGH-TECH NOT ONLY OFFERS US THE

POTENTIAL TO STRENGTHEN THE CRIMINAL JUSTICE SYSTEM'S NETWORK; IT

ALSO OFFERS US A WAY OF TYING IN COMMUNITY ANTI-CRIME EFFORTS.

I MENTIONED THAT ONE OF THE BENEFITS OF COMPUTERIZED SYSTEMS

IS THEIR ABILITY TO IMPROVE POLICE MANAGEMENT. I'M SURE SOME OF

YOU ARE FAMILIAR WITH PATROL CAR ALLOCATION SYSTEMS, FOR

INSTANCE, WHICH NIJ HAS HELPED TO DEVELOP; TWO YEARS AGO WE

COMPLETED AN UPDATED VERSION OF "P-CAM," WHICH IS IN OPERATION IN

A NUMBER OF MAJOR U.S. CITIES.

P-CAM DESIGNS BEATS AND ALLOCATES PATROL CARS TO THE BEAT,

BASED ON THE HISTORY OF THAT PARTICULAR BEAT. THE CALCULATIONS

INVOLVED IN MAKING THE MOST EFFECTIVE ALLOCATION OF PATROL

VEHICLES WOULD BE IMPOSSIBLY COMPLEX WITHOUT COMPUTERIZATION.

NOW, WE CAN CHANGE BEAT-PATTERNS OR BEAT-POLICY ON A MOMENT'S

NOTICE. WE CAN TRY OUT COST DIFFERENTIALS, MANPOWER NEEDS, AND

SO FORTH ON THE COMPUTER. WE CAN MAKE POLICE MAXIMALLY AVAILABLE

AGAINST CRIME PRESSURE, ON ANY GIVEN BEAT, AS CRIME FLUCTUATES

ACCORDING TO THE TIME OF DAY, WEEK, OR SEASON.

A VERY INTERESTING NEW POLICE MANAGEMENT APPLICATION WAS

RECENTLY DEVELOPED IN AN NIJ-FUNDED PROJECT IN MINNEAPOLIS. THE

ACRONYM FOR THIS ONE, FOR THOSE OF YOU WHO ARE STUDYING

WASHINGTONESE, IS "RECAP" -- AND IT STANDS FOR REPEAT CALL

ADDRESS POLICING. WE USE ACRONYMS, OF COURSE, TO SAVE A FEW

SECONDS OF TIME -- BUT RECAP SAVES POLICE HOURS AND HOURS OF

REPETITIVE AND FRUITLESS LABOR.

THIS PROJECT IS AIMED AT ONE OF THE MAJOR PROBLEMS WE FACE

IN RESPONDING TO CALLS FOR SERVICE. BY LETTING RECURRING CALLS

ABSORB POLICE TIME, WE MAKE IT HARD FOR OFFICERS TO CONCENTRATE

ON MORE SERIOUS ONGOING PROBLEMS.

[FEW POLICE DEPARTMENTS HAVE A CLEAR IDEA OF HOW MUCH OF

THEIR RESOURCES THEY'RE DEVOTING TO CHRONIC OR REPEAT CALLS.]

WHEN WE DID A [COMPUTER ANALYSIS] OF THE SITUATION IN THE

MINNEAPOLIS POLICE DEPARTMENT WE GOT SOME STRIKING RESULTS.

TWO-THIRDS (64%) OF THE CALLS TO THE MINNEAPOLIS POLICE

DEPARTMENT CAME FROM JUST 5 PERCENT OF THE ADDRESSES IN THAT

CITY.

THE DEPARTMENT ANSWERED THESE CALLS, OVER AND OVER AGAIN,

BUT THE UNDERLYING PROBLEMS THAT CAUSED THEM REMAINED UNSOLVED.

SOMETIMES THESE UNDERLYING PROBLEMS WERE SERIOUS AND COMPLICATED.

BUT NOT ALWAYS.

FOR INSTANCE, THERE WERE REPEAT CALLS FROM ONE ADDRESS

BECAUSE OF FALSE BURGLAR ALARMS -- THIS HAPPENED ABOUT 75 TIMES

IN ONE YEAR. THE COMPUTER ANALYSIS REVEALED A PATTERN. THE

FALSE ALARMS ALWAYS OCCURRED AROUND 5:30 OR 5:45 AM. WHAT WAS

THE PROBLEM? IT WAS THE BUNDLE OF NEWSPAPERS BEING THROWN

AGAINST THE FRONT DOOR EVERY MORNING, AND EVERY NOW AND THEN THIS

SET OFF THE ALARM.

OBVIOUSLY NOT ALL CHRONIC PROBLEMS ARE SO EASY TO SOLVE.

POLICE USING THE RECAP PROGRAM WILL WORK WITH PROPERTY MANAGERS,

OWNERS AND RESIDENTS TO SOLVE THE PROBLEMS AT EACH CHRONIC-CALL

SITE.

ANOTHER EXCITING POLICE MANAGEMENT TOOL IS THE DRUG USE

FORECASTING SYSTEM WHICH NIJ DEVELOPED AND WHICH IS NOW IN PLACE

IN 21 MAJOR AMERICAN CITIES. THE DRUG USE FORECASTING SYSTEM

(DUF) GIVES POLICE DEPARTMENTS REPORTS ON THE LEVELS AND TYPES OF

DRUG USE AMONG ARRESTEES, ON A REGULAR QUARTERLY BASIS. OVER

HALF OF ALL ARRESTEES IN AMERICAN CITIES ARE USING DRUGS AT THE

TIME OF ARREST, BUT THE TYPE OF DRUG CAN VARY WIDELY FROM ONE

CITY TO ANOTHER: FOR EXAMPLE, PCP WAS COMMONLY USED IN

WASHINGTON, D.C., (BUT NOW ITS PREDOMINANTLY COKE) WHILE

AMPHETAMINES ARE MUCH MORE COMMON IN SOME WEST COAST CITIES. THE

DRUG USE FORECASTING PROGRAM GIVES POLICE MANAGEMENT WARNING

ABOUT DRUG TRENDS, AND ALSO SOME INDEX OF WHETHER YOUR NARCOTICS

PROGRAM IS HAVING AN IMPACT.

SOME OF THE MOST EXCITING R & D BEING DONE IN HIGH-TECH IS

SPECIFICALLY RELATED TO DETECTION AND FORENSICS. THAT'S

PROMISING BECAUSE POLICE ARE THREE TIMES MORE LIKELY TO CLEAR A

CASE WHEN FORENSIC EVIDENCE IS USED.

I ALREADY MENTIONED, IN THE BEGINNING OF MY REMARKS, THE

PROSPECT OF COMPUTER-ASSISTED VOICE IDENTIFICATION. NIJ

CURRENTLY HAS A GRANT OUT FOR DEVELOPMENT OF A SYSTEM THAT WE

HOPE WILL PROVIDE A CREDIBLE SCIENTIFIC FOUNDATION FOR THE

ACCEPTANCE OF "VOICE PRINTS" IN COURT.

I ALREADY MENTIONED GENETIC TESTING -- THE DEVELOPMENT OF

DNA-IDENTIFICATION, WHICH WE OWE TO THE BRITISH. THIS IS

CERTAINLY ONE OF THE MOST SIGNIFICANT FORENSIC SCIENCE

BREAKTHROUGHS TO OCCUR IN MY LIFETIME. THE [JEFFRIES PROBE] WAS

A LANDMARK INVENTION. THE DRAWBACK, THOUGH, WAS THE SIZE OF THE

SPECIMENT IT REQUIRED (15-20 HAIRS, OR A TEASPOON OF BODY FLUID).

BUT WE NOW HAVE AN AUTOMATED METHOD (DEVELOPED UNDER AN NIJ

GRANT) OF TAKING THE DNA FROM A SINGLE HAIR FRAGMENT OR DROP OF

BLOOD AND MAKING ENOUGH COPIES SO THAT ITS UNIQUE CHARACTERISTICS

CAN BE STUDIED, AND AN IDENTIFICATION MADE. IN THE NEAR FUTURE,

THIS TECHNOLOGY WILL BE ABLE TO PROVE WITH VERY HIGH PROBABILITY

WHETHER A SUSPECT IS THE ONE WHO ACTUALLY COMMITTED A PARTICULAR

CRIME. I BELIEVE THAT IT WILL SOON BE ROUTINELY ACCEPTED IN

COURTS OF LAW.

A NEW AND EXCITING PROSPECT IN THE FIELD OF DETECTION IS --

AGAIN -- A PROGRAM THAT WAS DEVELOPED HERE IN BRITAIN. THIS IS

AN "EXPERT SYSTEM" (OR "ARTIFICIAL INTELLIGENCE") PROGRAM TO

IDENTIFY TOP SUSPECTS IN RESIDENTIAL BURGLARY CASES. IT WAS

DEVELOPED AND FIRST USED BY THE DEVON AND CORNWALL CONSTABULARY

UNDER BRIAN MORGAN (DEPUTY CHIEF CONSTABLE).

NIJ HAS ADAPTED THIS PROGRAM FOR A TEST USE IN THE U.S. IN

BALTIMORE COUNTY, MARYLAND. WE'VE EXPANDED IT TO CONTAIN OVER

100 "IF/THEN" STATEMENTS TO HELP US IDENTIFY BURGLARY SUSPECTS

BASED ON CRIME SCENE DATA. THE SYSTEM HAS JUST BEEN PUT INTO

OPERATION THIS MONTH.

A FEW WEEKS PREVIOUSLY, BALTIMORE COUNTY POLICE CAUGHT A

BURGLAR, INDEPENDENT OF THE SYSTEM; BUT THEY DECIDED TO PUNCH IN

THE CRIME SCENE PROFILE JUST TO SEE HOW THE PROGRAM WOULD

RESPOND. AND IT BROUGHT UP THIS BURGLAR'S NAME AS THE NUMBER ONE

SUSPECT! AND THE PERSON WHO WAS NUMBER TWO ON THE LIST WAS HIS

ACCOMPLICE IN AN EARLIER BURGLARY.

WE DON'T KNOW YET IF THIS EXPERT SYSTEM WILL HELP US CATCH

MORE BURGLARS. BUT IT WILL CERTAINLY ORGANIZE DETECTIVES' TIME

BETTER, GUIDING THEM RAPIDLY TO HIGH PRIORITY SUSPECTS. IN A

WAY, IT'S THE EQUIVALENT OF PUTTING YOUR MOST EXPERIENCED

DETECTIVES ON EVERY CASE.

SO ARE WE GOING TO JUST PUT THE COMPUTER ON THE CASE

EVENTUALLY AND PENSION OFF THE DETECTIVES? I HOPE THAT IS AN

OUTDATED FEAR BY NOW. COMPUTERS GO BY THE BOOK. THEY FOLLOW THE

RULES, RIGIDLY. THAT'S THE BEST THEY CAN DO.

BUT THERE IS A GREAT DEAL MORE TO DETECTION THAN THAT, AS

EDGAR ALLEN POE REMARKED IN THE FIRST DETECTIVE STORY EVER

WRITTEN, "THE MURDERS IN THE RUE MORGUE" [PUBLISHED 1841]. AS

POE SAID: "IT IS IN MATTERS BEYOND THE LIMITS OF MERE RULE THAT

THE SKILL OF THE ANALYST IS EVINCED." (POE GOES ON TO COMPARE

THE DETECTIVE'S ANALYSIS TO WHAT A CARDPLAYER DOES) . . . "HE

EXAMINES THE COUNTENANCE OF HIS PARTNER, COMPARING IT CAREFULLY

WITH THAT OF EACH OF HIS OPPONENTS. HE CONSIDERS THE MODE OF

ASSORTING THE CARDS IN EACH HAND . . . HE NOTES EVERY VARIATION

OF FACE AS THE PLAY PROGRESSES . . . THE DIFFERENCES IN THE

EXPRESSION OF CERTAINTY, OF SURPRISE, OF TRIUMPH OR CHAGRIN.

FROM THE MANNER OF GATHERING UP A TRICK HE JUDGES WHETHER THE

PERSON TAKING IT CAN MAKE ANOTHER IN THE SUIT. . . A CASUAL OR

INADVERTENT WORD; THE ACCIDENTAL DROPPING OR TURNING OF A CARD,

WITH THE ACCOMPANYING ANXIETY OR CARELESSNESS IN REGARD TO ITS

CONCEALMENT; THE COUNTING OF THE TRICKS, WITH THE ORDER OF THEIR

ARRANGEMENT; EMBARRASSMENT, HESITATION, EAGERNESS OR TREPIDATION

-- ALL AFFORD, TO HIS APPARENTLY INTUITIVE PERCEPTION,

INDICATIONS OF THE TRUE STATE OF AFFAIRS."

SOME THINGS HAVEN'T CHANGED, AND AFTER A CENTURY THAT'S

STILL A PRETTY GOOD DESCRIPTION OF DETECTIVE WORK. COMPUTERIZED

DETECTION IS GOING TO IMPROVE DETECTIVE WORK, NOT REPLACE HUMAN

DETECTION ANY MORE THAN COMPUTER DATING IS GOING TO REPLACE THE

REAL THING.

THE VAST QUANTITIES OF INFORMATION THAT ARE AVAILABLE TO US

CAN'T TELL US HOW TO THINK ABOUT -- BUT THEY CAN TELL US -- OR

SUGGEST TO US -- WHAT TO THINK ABOUT. NEW COMBINATIONS OF

INFORMATION CAN LEAD US TO NEW INSIGHTS.

I THINK THE TECHNOLOGICAL DEVELOPMENTS I'VE BEEN DESCRIBING,
AND OTHERS NOW IN EMBRYONIC FORM, OFFER US A TRULY FANTASTIC
ARRAY OF METHODS TO COUNTERACT CRIME. WE ALL NEED TO INVEST IN
THE R & D THAT MAKES THESE NEW DEVELOPMENTS POSSIBLE.

THANK YOU.

NOTE:

WITHIN THE LAST WEEK, NIJ HAS TESTED AND CERTIFIED A PAIR OF
ENGLISH HANDCUFFS. (INTERNATIONAL IMPACT)