

Internet of Things
FTC Workshop
November 19, 2013
Segment 3
Transcript

>> OK EVERYBODY.
WE'RE GETTING READY TO START.
EVERYBODY TAKE YOUR SEAT.
OK.

I HAVE BEEN ASKED BY THE
ORGANIZERS OF THE EVENT, WHICH
REALLY ISN'T ME, THAT EVERYBODY
SHOULD MOVE TOWARDS THE MIDDLE
OF THE SEATING TO SIT AND NOT
CROWD THE AISLE SEATS.
I WOULDN'T BUT THAT'S WHAT I
HAVE BEEN TOLD TO TELL YOU.
BUT THAT'S JUST ME.

[LAUGHTER]

OK.

WE'RE GOING TO START OUR
AFTERNOON SESSION NOW.
WE HAVE THE GREAT PRIVILEGE OF
HEARING SOME REMARKS GIVEN BY
FTC COMMISSIONER MAUREEN
OHLHAUSEN.

[APPLAUSE]

>> THANKS.

WELL, WELCOME EVERYBODY TO THE
AFTERNOON SESSION.
I'M DELIGHTED TO HAVE THE
OPPORTUNITY TO SET THE STAGE
THIS AFTERNOON FOR THIS INTERNET
OF THINGS WORKSHOP.
GIVEN MY FOCUS ON TECHNOLOGY
POLICY I'M VERY INTERESTED IN
THE EVOLUTION OF THE INTERNET.
FROM ITS START AS BASICALLY A
ONE WAY CONVERSATION WHERE WEB
SITES PROVIDED INFORMATION TO
USERS, TO THE RISE OF SOCIAL
MEDIA WHERE USERS NOT ONLY
TALKED BACK TO WEB SITES BUT
ALSO TALKED BETWEEN THEMSELVES
AND CREATED RICH CONVERSATIONS.
AND NOW WE'RE LOOKING AT THE

INTERNET OF THINGS, WHERE OUR PHONES AND APPLIANCES AND CARS AND OTHER ITEMS WILL BE ABLE TO CARRY ON CONVERSATIONS WITHOUT US AND REALLY JUST FILL US IN AS NECESSARY.

AND I BELIEVE THAT THE INTERNET OF THINGS HAS THE POTENTIAL TO TRANSFORM MANY FIELDS INCLUDING HOME AUTO MEDICATION, TRANSPORTATION AND MEDICINE, AS TODAY'S PANELISTS HAVE AND WILL CONTINUE TO DISCUSS.

AND THESE NEW CAPABILITIES WILL CLEARLY AFTER GREAT BENEFITS TO CONSUMERS IN THEIR DAY-TO-DAY LIVES.

BUT WE MUST ALSO BE SENSITIVE TO THE FACT THAT THE ABILITY TO COLLECT LARGE AMOUNTS OF INFORMATION AND, IN SOME CASES, ACTING ON THAT'S INFORMATION, LOOKS LIKE RAISES IMPORTANT CONSUMER PRIVACY AND DATA SECURITY ISSUES WHICH IS ONE OF THE TOPICS THAT OUR LAST PANEL WILL ADDRESS TODAY.

SO I'M PLEASED THAT THE FTC IS HOLDING THIS WORKSHOP TO ADDRESS CONSUMER'S PRIVACY.

I CONSIDER THE COMMISSION'S INTEREST IN IN INTERNET OF THINGS TO BE ANOTHER CHAPTER IN OUR WORK ON COMPUTER PRIVACY AND DATA SECURITY ISSUES.

IT IS A PARTICULARLY INTERESTING CHAPTER TO ME HOWEVER BECAUSE IT ALSO DRAWS TOGETHER SEVERAL HOT ISSUES SUCH AS DATA SECURITY AND MOBILE PRIVACY AND BIG DATA.

AND ON A MORE PHILOSOPHICAL LEVEL IT ALSO RACES THE QUESTION OF WHAT IS THE BEST APPROACH FORA GOVERNMENT AGENCY LIKE THE FTC TO TAKE WITH REGARD TO TECHNOLOGICAL AND BUSINESS INNOVATION.

THE SUCCESS OF THE INTERNET HAS IN LARGE PART BEEN DRIVEN BY THE FREEDOM TO EXPERIMENT WITH DIFFERENT BUSINESS MODELS, THE BEST OF WHICH HAVE SURVIVED AND THRIVED EVEN IN THE FACE OF INITIAL UNFAMILIARITY AND UNEASE ABOUT THE IMPACT ON CONSUMERS AND COMPETITION.

IT'S THUS VITAL THAT GOVERNMENT OFFICIALS LIKE MYSELF APPROACH NEW TECHNOLOGIES WITH A DOSE OF REGULATORY HUMILITY BY WORKING HARD TO EDUCATE OURSELVES AND OTHERS ABOUT THE INNOVATION, TO UNDERSTAND ITS EFFECT ON CONSUMERS AND THE MARKETPLACE, TO IDENTIFY BENEFITS AS WELL AS LIKELY HARMS, AND, IF HARMS DO ARISE, TO CONSIDER WHETHER EXISTING LAWS AND REGULATIONS ARE SUFFICIENT TO ADDRESS THEM BEFORE ASSUMING THAT NEW RULES ARE REQUIRED FOR THE FTC WE CAN HELP ENSURE INTERNET OF THINGS IS REALIZED BY USING OUR UNIQUE SET OF POLICY AND ENFORCEMENT TOOLS.

FIRST AND FOREMOST IN A NEW TECHNOLOGY OR AN INDUSTRY THAT IS RAPIDLY INNOVATING WE SHOULD USE OUR POLICY R AND D FUNCTION TO GET A BETTER UNDERSTANDING OF THE TECHNOLOGY ITSELF, THE NEW BUSINESS MODELS IT MAY ENABLE, ANY EXISTING REGULATORY STRUCTURES AND INCLUDING ANY SELF REGULATION, THE MARKET DYNAMICS AND THE NATURE AND EXTENT OF LIKELY CONSUMER AND COMPETATIVE BENEFITS AND RISKS.

SECOND, WE SHOULD USE THIS LEARNING TO EDUCATE CONSUMERS AND BUSINESSES ON HOW TO AVOID OR MINIMIZE ANY RISKS THAT WE MAY IDENTIFY PROVIDING CONSUMER

TIPS IS ONE OF THE FTC'S MOST VALUABLE AND COST-EFFECTIVE ACTIVITIES.

OF COURSE THE FTC IS ALSO AN ENFORCEMENT AGENCY AND IT CAN AND SHOULD USE ITS TRADITIONAL DECEPTION AND UNFAIRNESS AUTHORITY TO STOP CONSUMER HARMS THAT MAY ARISE FROM PARTICULAR INTERNET CONNECTED DEVICES.

THAT NOT ONLY HELPS CONSUMERS BUT BENEFITS THE COMPANIES INVOLVED IN INTERNET OF THINGS BY POLICING ACTORS THAT MAY TARNISH THE TECHNOLOGY ITSELF.

LIKE THE FTC SHOULD USE ITS FLEXIBLE APPROACH TO ANTITRUST ENFORCEMENT TO INVESTIGATE AND, WHERE APPROPRIATE, CHALLENGE COMPETITIVE HARMS OCCURRING IN THE INTERNET SPACE.

FOR THE REMAINDER OF MY REMARKS I WILL BRIEFLY TOUCH ON SPECIFIC ISSUES, DATA SECURITY, MOBILE PRIVACY AND BIG DATA, THAT HAVE PARTICULAR RELEVANCE TO THE DEVELOPMENT OF THE INTERNET OF THINGS.

AS YOU KNOW, THE FTC, HAS PART OF ITS BROAD FOCUS ON CONSUMER PRIVACY HAS AN ACTIVE DATA SECURITY PROGRAM.

AND THE IMPORTANCE OF THIS PROGRAM WILL ONLY CONTINUE TO GROW WITH THE INTERNET OF THINGS WHICH WILL SOMETIMES INVOLVE THE TRANSMISSION OF SENSITIVE DATA SUCH AS A CONSUMER'S HEALTH STATUS! OR PRIVATE ACTIVITIES WITHIN THE HOME.

YOU MAY HAVE HEARD ABOUT A RECENT FTC CASE THAT EXEMPLIFIES THE KINDS OF DATA SECURITY RISKS THAT THE INTERNET OF THINGS MAY PRESENT.

SO IN SEPTEMBER THE FTC SETTLE

ADD CASE AGAINST TREND NET WHICH SOLD ITS SECURE VIEW CAMERAS FOR PURPOSES RANGING FROM HOME SECURITY TO BABY MONITORING. ALTHOUGH THE COMPANY CLAIMED THAT THE CAMERAS WERE SECURE, THEY ACTUALLY HAD FAULTY SOFTWARE THAT ALLOWED UNFETTERED ONLINE VIEWING BY ANYONE WITH THE CAMERAS INTERNET ADDRESS. AS A RESULT, HACKERS POSTED LIVE FEEDS OF NEARLY 700 CAMERAS ON THE INTERNET SHOWING ACTIVITIES SUCH AS BABIES ASLEEP IN THEIR CONTRADICTION AND CHILDREN PLAYING IN THEIR HOMES. THE TIME OF CONSUMER HARM THAT WE SAW IN THE TREND NET CASE, SURVEILLANCE IN THE HOME BY UNAUTHORIZED VIEWERS FEELS CONCERNS ABOUT THE INTERNET OF THINGS OVER ALL. IT IS THUS CRUCIAL THAT COMPANIES OFFERING THESE TECHNOLOGIES TAKE THE NECESSARY STEPS TO SAFEGUARD THE PRIVACY OF USERS TO AVOID GIVING THE TECHNOLOGY A BAD NAME WHILE IT IS STILL IN ITS INFANCY. NOW TURNING TO MOBIL. AS WE ALL KNOW MOBILE HAS BEEN A HIGHLY DISRUPTIVE TECHNOLOGY THAT HAS BROUGHT GREAT OPPORTUNITIES TO BUSINESSES. AND THE GROWTH OF MOBILE DEVICES HAS BEEN AFT NO, MA'AM CHEM. ACCORDING TO THE INTERNATIONAL TELECOMMUNICATION UNION THE NUMBER OF MOBILE SUBSCRIBERS ROSE FROM 5.4 BILLION IN 2010 TO 6.8 BILLION AT THE END OF 2012. AND MOBILE DEVICES PLAY AN IMPORTANT ROLE IN THE INTERNET OF THINGS AS THEY COLLECT, ANALYZE, AND SHARE INFORMATION ABOUT USERS' ACTIONS AND THEIR

ENVIRONMENTS.

FROM THEIR CURRENT LOCATION,
TRAVEL PAT ANDERSON SPEEDS TO
THINGS LIKE SURROUNDING NOISE
LEVELS.

AND THIS RACES THE QUESTION OF
HOW BUSINESSES SHOULD CONVEY ON
A SMALL PHONE SCREEN INFORMATION
ABOUT WHAT DATA, SOMETIMES OF A
SENSITIVE NATURE THAT THESE
DEVICES AND APPS COLLECT USE AND
SHARE.

>> THE COMMISSION IS SETTING UP
A TECHNOLOGY UNIT OF TECH SAVVY
FOLKS AND WE HAVE HELD
WORKSHOPS, CONDUCTED RESEARCH
AND DEVELOPED EXTENSIVE CONSUMER
AND BUSINESS EDUCATION
MATERIALS.

THE COMMISSION HAS ALSO BEEN
VERY ACTIVE ON THE ENFORCEMENT
FRONT IN THE MOBILE SPACE.

ONE CASE THAT HAS IMPLICATIONS
FOR THE INTERNET OF THINGS
INVOLVED AN APP THAT COLLECTED
INFORMATION FROM CONSUMERS'
ADDRESS BOOKS ON THEIR MOBILE
PHONES WITHOUT THE CONSUMER'S
KNOWLEDGE OR CONSENT.

THE FTC SETTLED THE COMPLAINT
AGAINST PATH, A SOCIAL
NETWORKING COMPANY FOR THIS
ACTIVITY AS WELL AS FOR ALLEGED
VIOLATIONS OF THE CHILDREN'S
ONLINE PRIVACY PROTECTION ACT.
AS THIS CASE SUGGESTS, THE
COLLECTION OF PERSONAL
INFORMATION FROM A CONSUMER'S
MOBILE PHONE WITHOUT THE
DISCLOSURE OR PERMISSION MAY BE
DECEPTIVE -- MAY BE A DECEPTIVE
OR UNFAIR PRACTICE UNDER THE FTC
ACT?

>> THIS HAS OBVIOUS IMPLICATIONS
FOR OTHER INTERNET CONNECTED
DEVICES THAT COLLECT PERSONAL

INFORMATION ABOUT USERS AND PRUDENCE SUGGESTS IT SHOULD INCLUDE A WAY TO NOTIFY USERS AND OBTAIN THEIR PERMISSION. NOW TURNING FINALLY TO BIG DATA. ACCORDING TO SOME REPORTS, 90 PERCENT OF THE WORLD'S DATA HAS BEEN GENERATED OVER THE PAST TWO YEARS.

AND THE AMOUNT OF DATA IN THE WORLD WILL ONLY CONTINUE TO INCREASE WITH THE VOLUME AND DIVERSITY OF INFORMATION COLLECTED BY NEW TECHNOLOGIES INCLUDING THE INTERNET OF THINGS.

ALTHOUGH THE ABILITY TO COLLECT AND ANALYZE LARGE DATA SETS OFFERS BENEFITS IN MEDICAL AND SCIENTIFIC, ECONOMIC AND OTHER TYPES OF KNOWLEDGE AND RESEARCH AS WELL AS FOR BUSINESS INNOVATION, AT THE SAME TIME, THE COLLECTION OF LARGE AMOUNTS OF DATA ABOUT INDIVIDUAL CONSUMERS MAY ALSO RAISE PRIVACY CONCERNS. IN RESPONSE TO THESE CONCERNS, THE COMMISSION RECENTLY BEGAN A FORMAL STUDY OF THE DATA INDUSTRY.

WE SENT OUT FORMAL REQUESTS FOR INFORMATION TO NINE LARGE DATA BROKERS TO LEARN MORE ABOUT THEIR DATA PRACTICES, INCLUDING HOW THEY USE, AND SHARE CONSUMER DATA.

IT IS VITAL WE HAVE A GOOD UNDERSTANDING OF HOW DATA BROKERS OPERATE BECAUSE APPROPRIATE USES OF DATA CAN GREATLY BENEFIT CONSUMERS THROUGH BETTER SERVICES AND PRODUCTS AND INAPPROPRIATE USE OR INSECURE MAINTENANCE OF DATA COULD CAUSE SIGNIFICANT HARM TO CONSUMERS.

WE WILL CAREFULLY ANALYZE THE

SUBMISSION INTEREST THE COMPANIES USE THE INFORMATION FOR HOW TO PROCEED IN THIS AREA. SO JUST TO SUM UP, THE INTERNET HAS EVOLVED IN ONE GENERATION FROM A CONNECTION OF RESEARCH FACILITIES IN THE UNITED STATES TO ONE OF THE MOST DYNAMIC FORCES IN THE GLOBAL ECONOMY. IN THE PROCESS, RESHAPING ENTIRE INDUSTRIES AND EVEN CHANGING THE WAY WE INTERACT ON A PERSONAL LEFT.

AND INTERNET OF THINGS OFFERS THE PROMISE OF GREATER THINGS AHEAD FOR DURUMS IN COMPETITION. FOR CONSUMERS IN COMPETITION. THE FTC APPROACH OF DOING POLICY R AND D TO GET AN UNDERSTANDING OF THE TECHNOLOGY, EDUCATING CONSUMERS AND BUSINESSES ABOUT HOW TO MAXIMIZE THE BENEFITS AND REDUCE THE RISKS AND USING OUR TRADITIONAL ENFORCEMENT TOOLS TO CHALLENGE ANY HARMS THAT DO ARISE OFFERS, IN MY OPINION, THE BEST APPROACH.

THIS TYPE OF INFORMED ACTION WILL ALLOW FREE MARKETS AND TECHNOLOGICAL ONTARIO EVALUATION TO SEARCH THE GREATEST GOOD WHILE STILL MAINTAINING A FEDERAL RULE IN PROTECTING CONSUMERS AND PLAYING IN A LEVEL PLAYING FIELD FOR COMPETITORS. THANK YOU FOR YOUR ATTENTION AND I HOPE YOU ENJOY THIS AFTERNOON'S PANELS.

[APPLAUSE]

>> THANKS EVERYONE.

I'M CORA T. HAN.

STHOIS KRISTIN ANDERSON.

WE WILL BE MODERATING THE NEXT PANEL ON CONNECTED HEALTH AND FITNESS.

TODAY WE'RE GOING TO TALK ABOUT

DEVICE FROGS SMART PILL BOXES TO CONNECTED GLUCOSE MONITORS AND WEARABLE DEVICES THAT ALLOW PEOPLE TO COMPARE THEIR EXERCISE REGIMEN WITH THOSE OF THEIR FRIENDS.

AS OTHERS HAVE MENTIONED TODAY, THE DEVICES HAVE THE SIGNIFICANT POTENTIAL TO IMPROVE PEOPLE'S LIVES AND ALSO REDUCE COSTS. TO GIVE JUST ONE EXAMPLE THAT YOU MAY HAVE SEEN ON OUR ROTATING SLIDES, ACCORDING TO A RECENT STUDY, PATIENTS USING A MOBILE PILL BOX APP THAT NOVS FRIENDS, FAMILY AND CARETAKERS ABOUT THE PATIENT'S PILL USE REPORTEDLY TOOK THEIR MEDICATION ON TIME AT A RATE 31 PERCENT HIGHER THAN THE WORLD HEALTH ORGANIZATION ESTIMATED ACKNOWLEDGE FOR PATIENTS, WHICH IS 50 PERCENT.

BUT THESE DEVICES AND APPS ALSO RAISE SERIOUS PRIVACY AND SECURITY CONCERNS AND WE'RE GOING INTO INTO THOSE AS WELL AS WHAT THE PROTECTIONS SHOULD BE. SO BEFORE WE GET STARTED WE WANTED TO RAISE ONE OF THE ISSUES WHICH MAKES THIS AREA A LITTLE BIT UNIQUE AND THAT'S THE REGULATORY LANDSCAPE.

AS MANY OF YOU ARE AWARE THE FTC HAS AUTHORITY TO -- AGAINST APP DEVELOPERS AND OTHERS WHO MAY BE ENGAGING IN UNFAIR OR DECEPTIVE ACTS OR PRACTICES.

BUT THERE ARE OTHER REGULATORS IN THE SPACE AS WELL.

LIKE FDA AND HHS, WHO ALSO MAY PLAY A ROLE IN PROTECTING THE PRIVACY AND SECURITY OF HEALTH DATA.

SO, FOR EXAMPLE, THE FDA RECENTLY ISSUED DRAFT GUIDANCE

REGARDING THE MANAGEMENT OF SECURITY IN MEDICAL DEVICES AND CYBERSECURITY.

THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OR HIPAA'S SECURITY RULES MAY ALSO COME IN TO PLAY IF THE DEVICE OR APP CREATES, TRANSMITS OR STORES PROTECTED HEALTH INFORMATION AS PART OF THE INFORMATION SYSTEM OF A COVERED ENTITY SUCH AS A PHYSICIAN OR HOSPITAL OR INSURANCE COMPANY OR ONE OF THEIR CONTRACTORS.

SO, FOR EXAMPLE, IF A CONSUMER IS USING AN APP ON THEIR TABLET OR PHONE THAT CHECKS THEIR BLOOD PRESSURE LEVELS THIS WOULD NOT NECESSARILY BE PROTECTED BY HIPAA BUT IF THE PHYSICIAN DIRECTED THE CONSUMER TO SEND THIS FROM THE CONSUMER'S DEVICE BACK TO THE PHYSICIAN, THEN HIPAA PRIVACY AND SECURITY RULES MIGHT APPLY AND REQUIRE APPROPRIATE SAFEGUARDS BE IN PLACE TO PROTECT THAT INFORMATION.

SO WHILE WE'RE GOING TO FOCUS ON CONSUMER FACING DEVICES FROM THE PROTECTION OF THE FTC SOME OTHER PANEL I HAVE GOTS MAY RAISE AND IT'S IMPORTANT TO REMEMBER THERE ARE OTHER REGULATORS IN THE SPACE AS WELL W THAT WE WOULD LIKE TO INTRODUCE OUR ANALYSTS AND HAVE THEM SPEND A FEW MINUTES GIVING YOU BACKGROUND ABOUT THEMSELVES BEFORE WE GET INTO THE DISCUSSION.

>> OK.

SO FIRST WE WILL HEAR FROM SCOTT PEPPET.

A PROFESSOR AT THE UNIVERSITY OF COLORADO LAW SCHOOL AND HAS WRITTEN ABOUT THE PRIVACY

IMPLICATIONS OF SENSORS AND OTHER THAT PREVENT THE SHARING OF INFORMATION.

>> SCOTT PEPPET: HI AND THANK YOU FOR THE FACILITATORS FOR INVITING ME ON THE PANEL. THIS HAS BEEN GREAT ALREADY TODAY.

I'M GOING TO TALK REALLY, REALLY FAST BECAUSE WE DON'T HAVE MUCH TIME BUT I WANT TO START BY JUST SAYING THAT I LOVE THESE SORTS OF DEVICES.

I HAVE A WiFi-CONNECTED BLOOD PRESSURE CUFF AND A FITS BIT AND I HAVE LITTLE WATER BUGS IN MY BASEMENT AND I -- THAT TELLS ME WHEN THERE'S FLOODING AND I LIVE IN BOULDER SO THAT'S A USEFUL THING AND I THINK THERE'S A GREAT NEED FOR A LOT MORE INNOVATION IN THIS SPACE, AS MUCH AS THERE HAS ALREADY BEEN INNOVATION IN THIS SPACE.

YOU WRITE ABOUT EFFECTIVE TECHNOLOGY ON MARKETS AND IN THIS HEALTH SPACE IN PARTICULAR IN THE FITNESS AREA, THERE'S JUST BEEN UNBELIEVABLE CHANGE OVER THE LAST FEW YEARS, IN A BUNCH OF DIFFERENT CATEGORIES, WEARABLE DEVICES, WHAT ARE CALLED INTIMATE CONTACT DEVICES WHICH ARE LIKE STICKERS OR PATCHES THAT YOU WEAR THAT CAN MONITOR THINGS LIKE YOUR TEMPERATURE OR OTHER ASPECTS OF YOUR HEALTH, DIGESTIBLES, IMPLANTABLES, ALL OF THESE DIFFERENT HEALTH ADVICES HAVE BEEN MOVING RAPIDLY.

THAT SAID I DON'T WANT TO SAY A KIM OF THINGS ABOUT PRIVACY AND SECURITY IN PARTICULAR KIND OF TYING BACK TO THIS MORNING'S PANEL.

THE FIRST IS, AS JEFF SAID THIS MORNING, ANT HOME DEVICES, THESE ARE REALLY SILOED AND FAR FROM PERFECT.

YOU REALIZE IT IS NOT ONE CLOUD OF DATA THAT TELLS EVERYTHING ABOUT YOURSELF YET.

AND THERE ARE HUGE GAPS BETWEEN THE -- THAT PREVENT THE DEVICES FROM TALKING TO EACH OTHER.

THERE'S A HUGE VARIANCE IN THE WAY THINGS ARE STRUCTURED, IF YOU READ AS I DID THIS SUMMER, PRIVACY POLICIES OF THE HEALTH OR FITNESS DEVICES YOU SEE A LOT OF DIFFERENCE IN THE WAY THEY OWN THE DATA OR LET THE CONSUMERS OWN THE DATA AND WHAT THEY'RE SAYING ABOUT SHARING THE DATA AND ETC. AND THE FIRST POINT I WANT TO MAKE IS THIS IS NOT JUST AN ACCIDENT OF IT BEING EARLY WHY THE EVOLUTION OF THE INTERNET OF THINGS BUT IT'S IN PART BECAUSE THE COMPANIES HAVE NOT FIGURED OUT WHAT THEIR BUSINESS MODEL IS.

AS THEY TRY TO FIGURE OUT WHAT THEY BUSINESS MODEL IS, SOME OF THEM THINK THEY BUSINESS MODEL IS SELLING, YOU KNOW, LITTLE ARMBANDS THAT YOU WEAR AROUND YOUR WRIST BUT THEY'RE MISSING THE REALITY THAT IT'S PROBABLY THE DATA THAT IS THE MOST VALUABLE AND THEY ARE TRYING TO FIGURE OUT HOW THEY'RE GOING USE THAT DATA.

IN THE INTERNET SPACE WE HAVE FOCUSED -- MOST WORK SHOCHES FOCUS ON BEHAVIORAL ADVERTISING BECAUSE THE MODEL TO FUEL GROWTH HAS BEEN BEHAVIORAL ADVERTISING N WEARABLES AND IN WHAT WE HAVE SEEN SO FAR IN DEVICES LIKE FIT BIT AND OTHERS, THAT IS NOT THE

MAIN TOPIC OF CONVERSATION AT THE MOMENT.

WHERE ARE THEY HEADED WITH THE DATA?

THEY'RE HEADED NOT A DIFFERENT DIRECTION LARGELY ALTHOUGH I'M SURE ADVERTISING WILL ALSO PLAY A ROLE, THEY'RE HEADED TOWARDS REALLY CORE ECONOMICS OR ECONOMIC FUNCTIONS, THINGS LIKE CREDITWORTHINESS, INSURANCE, EMPLOYABILITY AND THE REVELATION OF CONSUMER PREFERENCES.

WHY?

BECAUSE THESE DATA COMING OFF THE SENSORS ARE INCREDIBLY HIGH QUALITY.

I CAN PAINT A DETAILED RICH PICTURE OF WHO YOU ARE BASED ON YOUR FIT BIT DATA OR ANY OF THIS OTHER FITNESS AND HEALTH DATA AND THAT DATA IS SO HIGH QUALITY THAT I CAN DO THINGS LIKE PRICE PREMIUMS OR I COULD EVALUATE YOUR CREDIT SCORE INCREDIBLY ACCURATELY.

THE DATA ARE GOING TO MOVE TOWARD THOSE ECONOMIC PURPOSES BECAUSE THEY'RE SO USEFUL FOR THAT.

THE FIRST THING I WANT TO SAY IS ABOUT THE BUSINESS AND NUMBER TWO, ONE BASIC PRINCIPLE THAT I THINK WE HAVE TO WRESTLE WITH, AT SOME LEVEL HERE, EVERYTHING REVEALS EVERYTHING.

THAT'S WHAT SENSORS ARE REALLY -- THAT'S THE REAL CHALLENGE OF SENSORS.

SO WE CAN TALK ABOUT HEALTH SENSORS AND SAY THEY'RE INTERESTING FOR REVEALING HEALTH BUT I CAN TELL WHETHER YOU'RE A GOOD CREDIT RISK BASED ON YOUR CREDIT SENSORS AND I COULD TELL SENSIBLY FROM HOW YOU DRIVE

YOUR CAR AND WHO YOU LEAVE THE STOVE ON TOO OFTEN AT HOME WHEN YOU GO OUT.

THIS DATA FLOWS ACROSS THE SILOS.

SECOND THING I TELLED TO SAY IT'S DIFFICULT TO ANONYMIZE THIS DATA.

THE DATA DEMONSTRATES WHAT IS CALLED SPARSE TEE AND IT'S VERY UNLIKELY THAT YOU AND I HAVE SIMILAR FIT BIT DATA.

WHY?

BECAUSE I MOVE COMPLETELY DIFFERENT THAN YOU.

IRA HUNT, CIO OF THE CIA SAID YOU CAN BE 100% IDENTIFIED BY YOUR FIT BIT DATA.

WHY?

NO TWO PERSONS' GAIT OR WAY OF MOVING IS THE SAME.

WE CAN ALMOST ALWAYS FIGURE OUT WHO YOU ARE BASED ON THAT KIND OF INCREDIBLY RICH DETAIL.

SIMILARLY IF YOU WANT TO READ A GREAT STUDY READ THE MOBILE PHONE STUDY FROM LAST YEAR CALLED UNIQUE IN THE CROWD THAT TALKS ABOUT SPARSE TEE OF SENSOR DATA.

THAT'S A SECOND ASPECT THAT I THINK WE NEED TO TALK ABOUT.

AND LASTLY, HOW POOR NOTICE AND CHOICE DOES HERE.

I SPENT, AGAIN, A LOT OF TIME THIS SUMMER LOOKING AT PRIVACY POLICIES AND IT'S ODD.

I BOUGHT A BUNCH OF DIFFERENT HEALTH SONS SOURCE, ALL OF THE ONES THAT'S WE WILL TALK ABOUT AND WENT THROUGH THE CONSUMER EXPERIENCE OF OPENING THE BOX, AND IT'S -- YOU KNOW, AS A LAW PROFESSOR, I WENT OPENING THE BOX LOOKING FOR THE PRIVACY POLICIES.

I DIDN'T FIND ANY OF THEM.
THEY'RE NOT IN THERE, NOT IN THE
USER GUIDE.

YOU CAN GET THE THING ON YOUR
RISK.

NOW IT'S NOT DOING MUCH YET
BECAUSE IT'S NOT HOOKED UP TO
THE WEB SITE THAT IT'S MEANT TO
TALK TO.

BUT EVEN WHEN YOU SIGN UP FOR
THE WEB SITE, IT'S JUST STRIKING
WHEN YOU GO THROUGH THE CONSUMER
EXPERIENCE HOW NOT SALIENT IT IS
THAT YOU'RE NOW ABOUT TO GENERAL
RACE A MASSIVE AMOUNT OF HIGH
VALUE DATA THAT YOU HAVE NEVER
SEEN BEFORE.

AM I DONE?

I'M DONE.

THANKS.

>> THANKS SCOTT.

>> NEXT WE WILL HEAR FROM STAN
CROSLY, DIRECTOR OF THE INDIANA
UNIVERSITY CENTER FOR LAW,
APPLIED RESEARCH.

AND A PRINCIPLE IN CROSLY LAW
OFFICES.

>> THANK YOU.

I WILL STAY HERE.

I'M A LITTLE WORRIED THE CIAL
SEE WHO I AM BY THE TIME I WALK
TO THE PODIUM.

ALSO I BROUGHT UP THE REFERENCE
TO MONTY PYTHON, THE SILLY WALK.
THAT'S A GREAT REFERENCE.

SO FOR THOSE OF YOU WHO CAME TO
LISTEN TO THIS TALK, INDIANA
UNIT CLEAR IS A JOINT VENTURE
BETWEEN THE SCHOOL OF LAW AND
MEDICINE AND INFOMATICS AND WE
ADDRESS THE NEEDS OF HEALTH AND
DATA, ACROSS THE HEALTH CARE
ECOSYSTEM IF YOU WILL.

IT'S A PRIVATE, SECURITY,
ETHICS, AND RISK AND THOSE
ASSESSMENTS AND UNDERSTANDING

APPROPRIATE USE AND BARRIERS TO
APPROPRIATE USE OF DATA.

WE ALSO BELIEVE THEY SAY IS A
TIMELY PANEL, THIS IS A TIMELY
TOPIC.

IT HAS ALWAYS BEEN &RUE THAT
MORE IS KNOWN ABOUT YOUR PRODUCT
OR SERVICE OUTSIDE THAN INSIDE.

IF YOU THINK ABOUT IT, GM MAKES
CARS AND GE MAKES REFRIGERATORS
AND THE CONSUMERS THAT MAKE
THOSE GOODS KNOW MORE ABOUT
WHETHER THAT PRODUCT IS WORKING
FOR THEM THAN GM OR GE WOULD.

IT'S ALWAYS BEEN THE CASE
AND TOUS IN HEALTH CARE AS WELL,
AS A DEVICE OR PHARMA OR COMPANY,
WHEN CONSUMERS ARE TAKING YOUR
PRODUCTS, YOU DON'T HAVE A GOOD
CLOSED LOOP FEEDBACK SYSTEM.
MORE SO KNOWN ABOUT YOUR PRODUCT
AND WHETHER IT WORKS OUTSIDE OF
THE WALLS OF YOUR COMPANY THAN
IN.

WE HAVE OVER THE DECADES TRIED
TO FIGURE THAT OUT.

WITH TILES AND OBSERVATIONAL
STUDIES AND SAFETY DATA THAT
COMES BACK.

AND SALES, RIGHT?

SALES IS A PROXY FOR WHETHER OR
NOT A PRODUCT IS GOOD OR NOT.

>> BUT THOSE ARE IMPERFECT
CLOSED LOOP SYSTEMS RIGHT?

THEN INTERNET INTO THE INTERNET
OF THINGS AND NOW WE HAVE
FOREST TO POTENTIAL TO HAVE A
CLOSE CLOSED LOOP SYSTEM.

IF YOU THINK ABOUT IT, AS A
COMPANY YOU ARE FACED WITH
LOOKING AT A CONSUMER OR PATIENT
POPULATION THAT IS STARTING TO
AGGREGATE THAT KNOWLEDGE SOURCE.

YOUR ABILITY TO INNOVATE HAS
RELIED ON THE FACT THAT YOUR
KNOWLEDGE IS CONCENTRATED.

THE KNOWLEDGE, THE RESEARCH THAT
YOU DID TO CREATIVITY THE
PRODUCTS, THAT'S A CONCENTRATED.
SOURCE AND YOU MINE THAT DATA
AND ASSET IT MUTT THAT IS NOW
OUTSIDE OF THE DOCTOR'S OFFICE,
SO HOW DO YOU AS ABOUT INTENT
TRY TO CLOSE THAT LOOP TO
UNDERSTAND WHAT THEY KNOW?
HOW DO YOU GET ACCESS TO THAT
INFORMATION?
WHAT IS THE APPROPRIATE USE WE
MAKE OF THIS INFORMATION?
IF YOU LOOK AT THIS, \$37 BILLION
HAS BEEN EARMARKED FOR DATA THAT
IS CREATED INSIDE THE WALLS OF
TRADITIONAL HEALTH CARE.
WE BELIEVE THAT FAR MORE ABOUT
HEALTH IS GOING TO GENERATE
OUTSIDE OF THE WALLS OF HEALTH
CARE THAN INSIDE.
IT'S THE GOOD NEWS YOU THE FTC
TO LOOK AT THE ISSUES.
SO THE ENTITIES PLAYING THERE
THIS SPACE HAVE A LUGE
RESPONSIBILITY TO TRY TO FIGURE
THIS OUT.
IN THE ENTITIES I TALKED TO,
THEY'RE ALL INTERESTED FROM
FIGURING OUT WHAT THE IS THE
APPROPRIATE USE OF INFORMATION,
HOW DO WE ENGAGE CONSUMERS THAT
DON'T WANT TO BE ENGAGED.
WE HAVE ALL GOTTEN TO THE DRESS
OFFICE AND GOTTEN THE HIPAA
NOTICE.
IF YOU GET IT ACTUALLY THAT'S A
STEP UP.
REALLY YOU GET THE SIGNED CHART
THAT SAYS SIGN HERE INDICATING
YOU HAVE GOTTEN THE HIPAA
NOTICE.
IF YOU AND FOR ONE, THEY HAVE TO
SCRAMBLE FOR ONE, FIND AND IT
GIVE IT TO YOU AND IF YOU READ
IT YOU WILL BE ONE OF THE KNEW

WHO EVER HAS.
AND WHEN YOU HAND IT BACK TO
THEM, THEY EITHER THROW IT IN
THE TRASH OR PUT IT BACK IN THE
PILE TO SHOW IT TO WHOEVER WANTS
TO SEE IT NEXT MONTH.
THAT'S NO WAY TO GET AN INFORMED
CONSUMER OR PUBLIC, RIGHT NO SO
COMPANIES ARE INTERESTED IN
TRYING TO FIGURE OUT THIS GAP.
HOW DO YOU CLOSE THIS GAP
BETWEEN.KNOWLEDGE THAT YOU NEED
TOO INNOVATE, THE KNOWLEDGE TO
TAKE CARE OF PATIENTS AND YET
RELYING ON SOME TYPE OF ARTIFACT
THAT EXISTS FOR WHEN THE WORLD
WAS A MUCH SIMPLER PLACE, FAR
LESS CONNECTED.
I THINK THAT'S WHERE WE'RE ALL
HEADED.
WE HAVE TO FIGURE THIS OUT.
SO WE ARE INTERESTED IN FIGURING
OUT WHAT IS THE APPROPRIATE USE,
THE APPROPRIATE SHARING OF
INFORMATION IN THIS INTERNET OF
THINGS IN THIS CONNECTED WORLD,
WHERE DATA WILL BE MORE
IMPACTFUL BECAUSE WE'RE NOT JUST
TALKING ABOUT BIG DATA.
BIG DATA WILL HAVE A HUGE IMPACT
IN HEALTH CARE, LIKELY ON THE
BACK END OF BIO MARKERS AND
OTHER THINGS LIKE THAT BUT SMALL
DAILY DIGITAL DATA, THAT'S WHERE
THE STRIDES WILL BE MADE IN
HEALTH CARE AND THAT'S WHERE THE
POTENTIAL IS AND THAT'S WHAT WE
ALL HAVE TO FIGURE OUT.
>> THANK YOU STAN NEXT UP WE
HAVE JOSEPH LORENZO HALL, THE
CHIEF TECHNOLOGIST AT THE CENTER
FOR TECHNOLOGY WHERE HE FOCUSES
ON THE TECHNOLOGY, LAW AND
POLICY.
>> THANKS A LOT.
I WANT TO THAT FTC FOR HAVING

THIS WORSHIP AND FOR -- THIS
WORKSHOP AND INVITING US HERE.
THE INTERNET OF THINGS BRINGS
GRANULE COMMERCIAL SURVEILLANCE
IN THE HOME AND THE SURVEILLANCE
THAT WE HAVE SEEN ONLINE QUITE A
BIT BUT IN RETAIL, PHYSICAL
STABILITIES AS WELL.

THE CAPACITY FOR UNINTEW IT
ACTIVE INFERENCE, THE WAY
PEOPLE CAN TELL THINGS ABOUT YOU
WITHOUT YOU BEING ABLE TO FIGURE
THAT OUT ON YOUR OWN IS REALLY
ENORMOUS FOR THESE KINDS OF
APPLICATIONS.

AS YOU KNOW THERE CAN BE AMAZING
BENEFITS AND THE POTENTIAL FOR
SERIOUS HARM AND SPECIAL IN
TELEHEALTH APPLICATIONS.

I CONSIDER THAT A CANARY IN THE
COAL MINE.

BAD THINGS START HATCHING WITH
TELEHEALTH AND HEALTH
APPLICATIONS THEN YOU WILL SORT
OF SEE THAT POISON THE WELL FOR
A WHOLE LOT OF ADDITIONAL KINDS
OF CONNECTED APPLICATIONS.

THE PRIVACY RIGHTS CLEARING
HOUSE EARLIER THIS YEAR DID A
NEAT STUDY OF SOMETHING LIKE 43
APPS, 43 HEALTH AND WELLNESS
APPS.

THE SAMPLE WAS CONSTRUCTED
RELATIVELY WELL, BUT ANYWAY, THE
FINDINGS FROM THAT WERE PRETTY
EYE OPENING TO A LOT OF US.

SOME THINGS THAT YOU WOULD
SUSPECT, FOR EXAMPLE FREE APPS
TEND TO HAVE MORE ADVERTISING.
THAT'S NOT ANYTHING TOO
SURPRISING.

BUT ANALYTICS IS USED BY MOST
APPS AND SOME CASES 10 OR MORE
INDIVIDUAL ANALYTIC COMPANIES
ARE USING THE INFORMATION.
THEY ALSO FOUND ONLY HALF OF THE

APPS THAT SHARE PERSONAL INFORMATION SHARE THIS IN AN ENCRYPTED MANNER SO THE OTHER HALF ARE NOT ENCRYPTING THIS. MANY SEND DATA TO THIRD PARTIES, DATA ICED FOR -- IN ALL CASES OVER UNENCRYPTED CONNECTIONS. AND NO APPS IN THEIR SAMPLE THAT STORED DATA LOCALLY, 83 PERCENT, NONE OF THEM STORED STUFF ON THE DEVICE.

AND HALF OF THEM HAD PRIVACY POLICIES AND OF THE HALF THAT HAD PRIVACY POLICIES -- HALF HAD PRIVACY POLICIES AND ONLY HALF OF THOSE WERE ACTUALLY TECHNICALLY ACCURATE NOR WHAT THEY WERE DOING WITH THE DATA. SO THIS IS AN ENORMOUS GAP IN TERMS OF WHERE WE HAVE TO GET TO, WE HAVE TO FIND A WAY TO BRING THE MARKET UP TO THE CASE WHERE WE ARE ENCRYPTING THINGS, WHERE WE'RE DOING WHAT WE'RE SAYING WE'RE DOING IN PRIVACY POLICIES AND I WOULD SAY INCREASINGLY MORE END TO END ESPECIALLY IN HEALTH FORMS OF ENCRYPTION AND NOT RELYING ON INFRASTRUCTURAL THINGS LIKE SSL AND FILE SYSTEM ENCRYPTION AND THIS GETS TECHNICAL BUT WAYS ONLY THE PROVIDER AND THE PATIENT CAN ACTUALLY SEE THAT DATA, WHICH MEANS YOU MAY NOT BE ABLE TO MONETIZE IT IN THE MIDDLE BUT THERE ARE WAYS TO DO THINGS ON THE CLIENT SIDE AND WE HAVE TO RECOGNIZE THERE ARE WAYS OF MONETIZE ON THE CLIENT SIDE WITHOUT YOU EVER SEEING THIS STUFF.

AND ONE OF THE BIG PROBLEMS HERE IS A LOT OF THE CONSUMER FACING HEALTH POLICIES AREN'T COVERED BY A ENTITY, NOT A PERSONAL

HEALTH RECORD SO THEY MAY NOT HAVE TO DEAL WITH THE BREACH NOTIFICATION RULES. THEY MAY AT THE STATE LEVELS BUT NOT THE ONES IN HIPAA. BUT CONSUMERS SHOULD BE ABLE TO DO WHATEVER THEY WANT WITH THEIR DATA. THEY SHOULD BE ABLE TO SHARE AND IT DO WILLY-NILLY THINGS THEY WANT. THE TRICK; THE GAP BETWEEN THE APPS THAT HELP YOU MANAGE THIS SUFFICIENT STUFF THAT THE CLEARING HOUSE STUDY SHOWED, AND THERE ARE GREAT COMPUTER SCIENCE ACADEMIC STUDIES ALONG THESE LINES AND THAT GAP IS PRETTY SUBSTANTIAL. AT CDT WE THINK THERE SHOULD BE BASELINE CONSUMER LEGISLATION IN THE U.S. THAT APPLIES TO ALL PERSONAL DATA. WE SAID THAT FOR MANY, MANY YEARS. KNIGHTS BIG SURPRISE. THAT MAY NOT HAPPY SOON NUCH FOR TELEHEALTH, TO GIVEN US THE PROMISE THAT YOU WOULD SEE FROM THESE APPLICATIONS. SO WHAT WE STARTED TO ARGUE IS THAT THE FTC SHOULD BE GIVEN LIFNLTD AUTHORITY IN HEALTH TO REGULATE, FOR EXAMPLE, CONVENING MULTISTAKEHOLDER GROUP TO BUILD A CODE OF CONDUCT WITH THE INCENTIVE BEING THE FT KRMPLEIGHT GETS TO ANOINT IT AS BEING PARTICULAR LIFT CONSUMER PROTECTIVE AND INNOVATION PROMOTING OF INNOVATION AND THEN YOU GET A SAFE HARBOR FROM SECTION 5 ENFORCEMENT. THE COOL THING ABOUT OUR PROPOSAL ALSO IS, IF YOU CAN'T GET PEOPLE TOGETHER TO MAKE THIS

CODE OF DOCUMENT IN A SUFFICIENT AMOUNT OF TIME, LIKE A CLEAR, THE FTC SHOULD HAVE AUTHORITY TO WRITE BASELINE OF THE PRIVATE AND SECURITY GLIENLS AND STUFF LIKE THAT.

I'M ALMOST OUT OF TOWN BUT WE THINK THE MARKET SHOULD BE DOING BETTER AND THE FTV HAS A PLACE TO PLAY IN HELPING THAT.

THANK YOU.

>> THANK YOU, JOA. NEXT UP, WE HAVE JAY RADCLIFFE, SECURE ANNAL IT FOR INGUARDIANS AND WORKING IN THE SECURITY FIELD OVER 12 YEARS.

>> THE NEXT SLIDE UP.

OK.

SO I AM A UNIQUE MEMBER OF THE PANEL IN THE WAY THAT YOU HAVE HEARD TODAY ABOUT THE GREAT THINGS THAT WE CAN DO WITH CONNECTED DEVICES IN INTERNET OF THINGS AND ALSO THE POTENTIAL FOR THE MONSTER BEING UNDER THE BED OR THE BOGEY MAN BEING IN THE CLOSET.

MY ROLE IS THAT I GO IN AND DRAG THE MONSTER OUT OF THE BED AND SHOW YOU WHAT HE LOOKS LIKE. FOR THE PAST 20 YEARS IVE HAVE BEEN AT THE FRONT LINES OF COMPUTER SECURITY.

I STARTED OUT DOING E-MAIL SECURITY AND THEN WEB SITE SECURITY AND THEN FINANCE.

BUT UNFORTUNATELY FOR ME I WAS DIAGNOSED WITH TYPE I DIABETES AT MY 22ND BIRTH DAY AND I HAVE BEEN ATTACHED TO VERSE DEVICES FOR A VARIETY OF TIMES.

IN 2011 I DID A PRESENTATION AT BLACK HAT WHERE I WAS ABLE TO REMOTELY SURGEON MY BUMP OFTEN WITH MY COMPUTER.

AND I COULD CHANGE EVERY SETTING

AND MAKE IT LOOK LIKE THIS WHICH IS A PUMP THAT DOES NOT DELIVER MEDICINE ANYMORE.

THIS YEAR I DID THE SAME THING TO ANOTHER PUMP THAT REPLACED THE COMPANY.

BOTH COMPANIES ARE VERY LARGE COMPANIES AND THEY -- THE ISSUES THAT I SHOWED THIS YEAR BROUGHT ME TO GO TO THE HOSPITAL TWO TIMES, DUE TO PROBLEMS WITH CONNECTED DEVICES, DUE SOFTWARE FAILURES AND DESIGN FAILURES.

THESE THINGS ARE NOT THEORETICAL.

THESE THINGS ARE LEGAL.

THESE THINGS ARE HAPPENING RIGHT NOW.

THEY'RE HAPPENING TO DEVICES THAT YOU'RE BUYING.

AND IT'S NOT SOMETHING THAT IS PUBLICLY WELL-KNOWN.

IT'S NOT SOMETHING THAT CONSUMERS ARE VERY WELL KNOWLEDGED ABOUT.

CONSUMERS CAN'T MAKE GOOD DECISIONS BECAUSE THE INFORMATION THEY'RE GETTING IS INCOMPLETE.

AND OFTENTIMES NOT IN A MALICIOUS WAY BUT IN A WAY THAT IT HASN'T BEEN RESEARCHED YET.

THIS IS REALLY NEW CUTTING-EDGE STUFF.

AND ITS SCARY.

IT'S SCARY TO SEE THESE DEVICES THAT WE DEPEND UPON TO KEEP OUR CHILDREN ALIVE, KEEP OUR GRANDPARENTS ALIVE, TO KEEP OUR NEIGHBORS ALIVE.

NOT WORKING THE WAY WE THOUGHT THEY WOULD.

HAVING UNINTENTIONAL CONSEQUENCES FROM THE WAY THEY'RE CONNECTED AND PUTTING COMPUTERS IN OUR LIVES TO

CONTROL OUR HEALTH.
TO MONITOR OUR HEALTH.
THESE FEATURES ARE THE THINGS
THAT I END UP WORKING ON NOW
INSTEAD OF THE INTERNET.
I DON'T SECURE YOUR WEB SITE.
I DON'T SECURE YOUR E-MAIL
ANYMORE.
NOW I'M SECURING THAT METER THAT
THEY PUT ON THE SIDE OF YOUR
HOUSE THAT HAS AN LCD DISPLAY
AND TELL THE POWER COMPANY HOW
MUCH POWER YOU'RE USING ALL THE
TIME.
IT'S THE DEVICE ATTACHED TO MY
LIP RIGHT NOW THAT TELTD ME MY
BLOOD GLUCOSE VALUE OVER THE
LAST 24 HOURS.
IT'S THE FIT BIT I WEAR TO MAKE
SURE I DO EXERCISE TO KEEP MY
DEENTS IN CHECK.
THESE ARE ALL THINGS I'M
ACTIVELY RESEARCHING AND PEOPLE
IN MY FIELD ARE RESEARCHING TO
MAKE SURE THAT WE ARE TAKING THE
MONSTER OUT OF THE BED, TATING
THE BOOGIE MAN AND SEE GOING HE
IS EVEN IN THERE AND IF HE IS
WHAT CAN WE DO ABOUT IT.
AND I'M PROUD TO BE ON THE PANEL
HERE WITH THE FTC BECAUSE
THEY'RE LOOKING TO DO SOMETHING
ABOUT IT, YOU KNOW.
SINCE 200011 I HAVE STRUGGLED TO
FIND REGULATORY AGENCIES THAT
CAN AFFECT CHANGE.
WHEN INITIALLY I WENT TO THE
FDA, THEY SAID I DON'T KNOW WHAT
WE SHOULD DO ABOUT THIS.
PROBABLY SOMETHING.
TWO SENATORS ORDERED THE GAO TO
DO AN INVESTIGATION.
WHAT THEY FIND WAS NO
INVESTIGATOR AGENCY WAS LOOKING
AT THE SECURITY OF THESE
DEVICES.

THE FTC SAID THAT'S NOT US.
THEY SAID THE WAY THE RADIO
TRAPS MITTS NOT WHAT IS
TRANSMITTED.

AND THE FDA SAID NOT US, WE LOOK
AT HOW THE MEDICAL PART OF IT
WORKS.

AND IT TURNS OUT THERE'S A HUGE
GAP WHERE NOBODY IS LOOKING AT
THE SECURITY OF THESE DEVICES
FROM A CONNECTED DEVICE
PERSPECTIVE.

AND THAT REPORT HAS PROMPT ADD
LOT OF CHANGE IN THE FDA, INCH
EXPIRING THEM TO LOOK AT THE
EVENTS AND HOW WE CAN MAKE THE
WORLD A SAFER PLACE.

BEFORE SOMEBODY GETS REALLY
PHYSICALLY HURT OR POTENTIALLY
DIES FROM A CONNECTED DEVICE
FAILURE.

SO THOSE ARE THE THINGS I WORK
ON AND THOSE ARE THE TYPES OF
INSIGHTS THAT I HOPE TO BRING TO
THE FTC, BRING TO DIFFERENT
POLICY PANELS TO HELP THEM GET
THE PERSPECTIVE THAT THEY NEED
OF WHAT ACTUALLY IS OCCURRING ON
THE GROUND.

THANK YOU.

>>[APPLAUSE]
SMGHTS.

>> FINALLY WE HAVE ANAND IYER,
PRESIDENT AND CHIEF OPERATING
OFFICER OF WELL.COMMUNICATIONS
INCORPORATED WHERE HE OVERSEES
THE MOBILE AND WEB BASED
PLATFORM AND INTEGRATION TO
HEALTH MANAGEMENT PROGRAMS.

>> THANKS GUYS.

I'M GOING TO CONTINUE IN THE
SAME VEIN OF STARTING TO TAKE
THIS AND YOU GUESS NOT JUST
ABOUT THE DENOMINATOR OF WHAT WE
NEED TO DO FROM A PRIVATE
SECURITY STANDPOINT BUT THE

NUMERATOR, WELL DOCK WAS FOUNDED BY ENDOCRINOLOGIST IN 2005, BEFORE THE IPHONE CONSISTED BEFORE THE WORD APP WAS PART OF OUR VERNACULAR AND IT WAS BORN OF AN OBSERVATION THAT PATIENTS THAT CAME INTO THE CLINIC, I'M A TYPE II PATIENT MYSELF.

I HAVE HAD DIABETES THE LAST 12 YEARS.

YOU TRY YOUR BEST TO MANAGE THIS DISEASE.

YOU DO WHAT YOU HAVE TO DO WITH YOUR GLUCOSE, MEDS, STRESS, SMOKING, DIET, EVERYTHING THAT IS 360 OF DIABETES BUT THERE'S A LITTLE THING CALLED LIFE THAT GETS IN THE WAY THAT PREVENTS YOU FROM DOING WHAT YOU NEED TO DO.

YOU DID ALL OF MY DOCTORAL WORK IN DATA RECOGNITION SO I'M DATA JUNKIE.

I WOULD TAKE MY STUFF AND GIVE TO IT MY DOCTOR AND I WOULD GRAPH IT BECAUSE I'M A NERD.

WHAT IS A DOCTOR GOING TO DO IN A THREE MINUTE OFFICE VISIT?

THE FRONTLINE IS PRIMARY CARE.

THEY DON'T KNOW WHAT TO DO BECAUSE YOUR ME NOT JUST THERE FOR BLOOD GLUCOSE.

YOU H1N1 AND BUMP AND SCRATCH AND A ITCH AND HOW IS YOU WERE GLUCOSE -- IT'S LIKE FLOTION THE DAY BEFORE YOU GO TO THE DENTIST.

YOU'RE NEVER AS GOOD AS THE DAY YOU SEE YOUR DOCTOR.

SO WE ASK, CAN WE ACTUALLY CONVERT THAT LAPSE IF YOU WOULD, IN NOT JUST THE DATA BUT THE INFORMATION, KNOWLEDGE AND ACTION THAT ENSEES FROM THAT DATA AND COULD WE DO THREE THINGS.

COULD WE PUT SOFTWARE ON A CELL PHONE AND THIS IS A NOKIA, SO IT'S ON SMARTPHONES AND DUMB PHONES, BUT COULD YOU USE THAT TO COACH THEM WHAT TO DO. IF THE GLUCOSE IS HIGH, YOU TELL THEM HOW TO DROP IT. HOW I DROP IT AND JAY DROPS ARE DIFFERENT.

WE HAVE DIFFERENT CO-MORBIDITIES AND -- SECONDLY COULD YOU SHOW PATTERS, COULD YOU LOOK FOR FRIENDS, WHETHER THEY'RE EXERCISE TRENDS OR SMOKING TRENDS OR EATING TRENDS -- THAT'S ACTUALLY MY PHONE RINGING.

VERY COOL.

[LAUGHTER]

THE LAST THING IS COULD YOU GIVE TO A DOCTOR, SAY IN THE AMOUNT THEY WANTED, ONCE IN THREE MONTHS, IN THE FORMAT THAT THEY CHOSE, HEY, HERE IS WHERE THE PATIENT, HERE IS WHERE THEY ARE TODAY, HERE IS WHAT CHANGED AND HERE IS WHAT YOU OUGHT TO DO, THIS IS EVIDENCE BASED GUIDELINE BUT YOU DO WHAT YOU THINK.

WHEN WE CAN OUR FIRST TRIAL WE DROPPED DAY ONE DIABETES BY TWO POINTS.

A1C IS THE AMOUNT OF SUGAR IN YOUR BLOOD FOR ALL INTENTS AND PURPOSES.

THE GUIDELINE BY THE ADA17 PERCENT WHICH MEANS 7 PERCENT OF YOUR BLOOD IS SUGAR.

EVERY 8 TO 9 REPRESENTS 43 PERCENT IN THE RISK MUCH HEART STROKE, KIDNEY FAILURE, AMPUTATION, BLINDNESS -- THE FDA HERALD'S DROP IF IT DROPS A1C BY .5 OF A POINT.

ONE DRUG DROPS IT .7 SO WHEN

THEY SAID 2 POINT REDUCTION WHAT ARE THEY DOING?

THEY'RE DOING WHAT THEIR DOCTOR TOLD THEM TO DO.

DOCTORS WHO RECEIVE THEIR ANALYSIS ARE FIVE TIMES MORE LIKELY TO MAKE A CHANGE OTHER TITRATE MEDICATION.

SO WE SAW IN A QUICK SWATH WITH THAT COMES ABOUT 630 THERE ARE A PATIENT PER MONTH COST SAVINGS.

YOU SAY WITH THAT VALUE PROPOSITION, WHAT DO I NEED TO DO TO ENSURE PRIVACY, SECURITY AND WE WILL TALK ABOUT SECURITIES AND PEOPLE TALKING ABOUT DATA SECURITY AND IT'S ABOUT THE INFRASTRUCTURE AND DATA AND EVERYTHING IN BETWEEN, THE FULL VALUE CHANGE.

LET ME SHOW YOU BECAUSE CORA WANTED ME TO SHOW YOU HOW THIS WORKS.

I WILL GIVE YOU A QUICK -- GOOD, THAT'S KEEPING UP WITH ME.

SO IF I GO IN NOW AND I WILL JUST MAKE -- WHAT WOULD AN APPLICATION BE IF IT WEREN'T PASSWORD PROTECTED.

I'M GOING TO PUT IN A PASSWORD. IT'S NOW ON.

VERY GOOD.

SO IF I GO IN AND MAKE A NEW ENTRY, THERE'S A TWO SECOND LAG BETWEEN WHAT I SEE AND YOU SEE BUT HOPEFULLY IT WILL WORK.

LET'S SAY I ENTER LOW BLOOD GLUCOSE BECAUSE I'M FEELING SHAKY AND I HAVE HAVE A PUMP AND SAY I ENTER 65 PERS DIDDY LITER, IT WILL TELL ME BECAUSE WE'RE A CHAS II FDA DEVICE, CLASS II MEDICAL DEVICE.

IT SAYS IT'S LOW.

THEY SAID, WELL, YOU MANUALLY ENTERED IT SO CHECK MR. IT'S

TRUE OR NOT BECAUSE IT'S NOT
COMING DIRECTLY FROM THE
MACHINE.

THEY WANT THE TRUTH.

SO, YES IT'S LOW.

THEN YOU FOLLOW THE 15-150 TIP.

A TEACHABLE MOMENT.

THIS IS A COUNCILMAN WAY TO
TREAT THE CONDITION.

IT GIVES ME EXAMPLES OF WHAT I
CAN CONSUME AND TAKE, WHICH IS
GREAT BECAUSE YOU ALWAYS DON'T
NOPE WHAT TO DO.

IT STARTS A TIMER.

EVEN IF THE PATIENT SHUTS THE
PHONE OFF IT WILL TURN IT PACK
ON AND REMIND THEM IN 15 MINUTES
IT'S TIME TO RECHECK.

AT THAT POINT IN TIME IF I GO IN
AND RECHECK I HAD SAVE YOU HAVE
THE 15 MINUTES, SAY I PUT IN A
GOOD NUMBER WHICH IS 108, LIT
TELL ME, HEY, GREAT, YOU GET AN
A + BLAH, BLAH, BLAH BECAUSE
IT'S ALL ABOUT BEHAVIOR

MODIFICATION AND MAKING SURE YOU
WORK WITH THE PATIENT AND THE
WAY -- SOME PATIENTS TOLD ME IF
YOU GIVE ME ONE MORE WAY TO GO,
I WILL THROW THE PHONE AWAY.
THE NEXT SAYS I WOULD LIKE TO
SEE A PICTURE OF MY GRANDCHILD.
LAST, LAST THING I WILL SAY IS,
FIST AN FDA CLEARED CLASS II MEL
DEVICE AND NOW FOR THE FIRST
TIME IN HISTORY, ANYWHERE IN THE
WORLD, WE HAVE A PRESCRIPTION
CODE FOR THIS.

WE HAVE A DRUG CODE FOR THIS
SOFTWARE AND THE FIRST TIME A
DOCTOR CAN PRESCRIBE SOFTWARE TO
THEIR PATIENT WHICH BRINGS THE
PATIENT PROVIDER AND WE WILL
TALKED WHAT THEY MEANS IN TERMS
OF SECURITY AND HIPAA AND WHAT
NOT BUT THIS IS NOW A PRESCRIBED

ENTITY THAT COMES FROM THE DOCTOR TO THE PATIENT AND WITH THESE OUTCOMES.

SO THAT'S IT.

[APPLAUSE]

>> THANK YOU.

>> THANKS.

SO LET'S GET THE DISCUSSION STARTED.

FIRST TO SET THE STAGE, I JUST WANT TO RAISE THIS FOR THE PANELISTS.

HOW HAVE YOU SEEN THE MARKETPLACE EVOLVE OVER THE LAST FEW YEARS IN TERMS OF THE PRODUCTS AVAILABLE AND THEIR IMPACT ON CONSUMERS?

>> I WILL GO FIRST.

AS A PATIENT I'M VERY KEEN. AS A DIABETIC -- DIABETES IS ON THE FRONT LINES OF CONNECTED DEVICES BECAUSE PATIENTS HAVE A LOT OF CONTROL OVER THEIR DISEASE.

IT'S VERY INTERACTIVE LIKE HE DEMONSTRATED.

YOU'RE DOING THE MEDICATION AND THE TESTING ALL THE TIME.

WE ALL KNOW SOMEBODY THAT PRICKS THEIR FINGER AND TESTS THEIR BLOOD, OF COURSE IT FAMILY MEMBER OR FRIEND.

SO THESE DEVICES ARE COMING OUT. IN THE LAST FOUR YEARS THERE'S BEEN A WEALTH OF DEVICES TO HELP DIABETICS AND INFORMATION TO HELP DIABETICS DO THESE TYPE OF EVENTS TO HELP THEIR BLOOD SUGARS AND THE STUDIES HAVE SHOWN TREMENDOUS AMOUNTS OF VALUE IN THAT.

SO IT'S A VERY, VERY GOOD THING, YOU KNOW.

67 SO I'M SEEING A LOT OF THINGS FROM THAT PERSPECTIVE.

>> I WOULD SAY ONE THING LOAFER

THE LAST FIVE YEAR, OFTEN THE ONE HARD YOU HAD REALLY SERIOUS MEDICAL DEVICES THAT WERE BEING DEVELOPED.

ON THE OTHER HAND YOU HAVE CONSUMER DEVICES.

WE HAVE OBVIOUSLY SEEN CONSUMER DEVICES EXPLODE BUT THEY STARTED OFF BEING FAIRLY LIGHT IN TERMS OF WHAT THEY COULD DO.

SO A PEDESTRIANMETER, A FANCY PEDMETER, OR A FANCIER ONE BUT THERE'S BEEN A BIG GAP BETWEEN THE MEDICAL DEVICES ON THE ONE HARD AND CONSUMER DEVICES ON THE AND OTHER THAT SEEMS TO BE NARROWING.

YOU KNOW YOU HAVE -- INCREASINGLY YOU HAVE CONSUMER DEVICES, FOR EXAMPLE THERE'S A NEW DEVICE CALLED THE SCAN-A-DO SCOUT.

YOU HOLD IT UP TO YOUR FOREHEAD FOR A SECOND OR YOUR KID'S FOREHEAD AND IT MEASURES HEART RATE, TEMP, RESPIRATORY RATE, STRESS LEVELS, A BUNCH OF THINGS THAT A HOME LITTLE DIGITAL DEVICE COULDN'T DO A YEAR AGO AND THEY'RE COMING OUT WITH A AND AN-A-DO URINALYSIS FOR YOUR HOME.

YOU HAVE MIGHT THINK THAT IS WEIRD, I DON'T WANT TO DO THAT. YOU MIGHT WANT TO DO IT OR HAVE YOUR KED DO IT.

SOMEWHAT HAPPENING IS THAT GAP IS STARTING TO NARROW WHICH IS REALLY COOL.

THE OTHER THING TO IS YOU'RE SEEING LOOTS OF FOLKS TRYING TO -- COMING UP WITH CREATIVE PLACES TO PUT SENSORS OR WAYS TO USE SENSORS SO MY FAVORITE EXAMPLE IS, THERE'S NOW -- THERE'S NOW A BRA THAT HAS A

TEMP SENSOR IN IT.

WHY WOULD YOU WANT TO DO THAT?
BECAUSE IT TURNS OUT ONE OF THE
EARLIEST WAYS TO DETECT BREAST
CANCER IS VERY SLIGHT CHANGES IN
TEMPERATURE.

SO THEY'RE PLAYING AROUND WITH,
WELL, WOULD THIS WORK?

ANSWER, YES, IT DOES SEEM TO
WORK.

SO THERE'S A LOT OF INNOVATION
IN THAT CONSUMER HEALTH MEDICAL
SPACE THAT IS GETTING TIGHTER.

>> AND THE REDUCING THE GAP EVEN
FURTHER, IN 2014, YOU'RE GOING
TO SEE A LOT OF PROVIDERS
RESPONDING TO THE INCENTIVES
PART OF MEANINGFUL USE PROGRAM
WHERE PATIENTS ARE GOING TO BE
ABLE TO VIEW, DOWNLOAD AND TRANS
MITT THEIR MEDICAL RECORDS,
WHEREVER THE HECK THEY WANT AND
SO YOU'RE GOING TO SAY -- YOU
HAVE ALREADY SEEN A TON OF NEED
APPS ON YOUR MEDICAL RECORDS.

COMPANIES ARE DOING THESE IN
NEAT WAYS AND I THINK THAT IS
GOING TO FURTHER BRIDGE THE GAP
TO WHERE YOU HAVE DATA ON YOUR
PHONE THAT CAN BE YOUR ENTIRE
LIFE'S MEDICAL HISTORY, AND THAT
IS UNDOUBTEDLY SENSITIVE AND
COULD BE -- IN ADDITION TO BEING
POTENTIALLY HARMFUL OR
LIFE-THREATENING, THERE'S A SET
OF -- MEDICAL IDENTITY THEFT IS
A HORRIBLE SENSE OF IDENTITY
THEFT AND THESE KINDS OF DATA
CAN BE USED TO DO EXACTLY THAT.

>> MAYBE ONE LAST THOUGHT, AND I
WILL BE THE CONTROVERSIAL ONE.
SO I AGREE WITH EVERYTHING THAT
HAS BEEN SAID.

HERE IS WHERE THE CONTROVERSY S
THAT IS, WE'RE SEEING AN IMMENSE
AMOUNT OF INNOVATION FROM A

USABILITY SIDE AND USER EXPERIENCE.

THINGS AT THE GAMING INDUSTRY, ENTERTAINMENT INDUSTRY, FINANCIAL SERVICES, YOU PICK UP A GAP AND THEY'RE FUN TO USE. YOU PICK UP A MEDICAL DEVICE AND THROW IT AWAY.

THAT'S WHY -- THESE DEVICES ARE -- I MEAN, AS A PATIENT, I GOT TO USE THEM.

IF YOU 24 STACK THEIR AUTOABILITY AGAINST BEST IN CLASS PRACTICES FOR USABILITY, WHETHER IT'S SOFTWARE OR HARDWARE, THEY FAILED.

MISFABLY, NOT JUST FAILED BUT BOTTOM OF THE STACK.

SO NOW THE QUESTION THAT ALL CONSUMERS BECAUSE AT THE END OF THE DAY, INSIDE THE PATIENT IS A PERSON.

AND EVERYBODY TALKS ABOUT THE PATIENT.

THEY DON'T TALK ABOUT THE PERSON.

INSIDE THAT PERSON THEY WANT TO USE THINGS THE WAY THEY WANT TO USE THINGS.

WHY CAN'T I HAVE MY DATA COME FROM FACEBOOK.

WHERE DO YOU DECRYPT THE DATA. WAIT A MINUTE.

YOU WANT TO SEND THAT AND EXPORT TO TWITTER OR FACEBOOK?

WHERE ARE YOU DECRYPTING THE DATA?

WE SAID WE WON'T TO THAT BECAUSE SOCIETY ISN'T THERE YET AND YOU AREN'T THERE YET BECAUSE WE HAVEN'T FIGURED THAT OUT.

I THINK THAT'S WHERE WE'RE GOING TO HAVE A HUGE -- KIND OF CLASH IS THE HONEST TRUTH.

OUT OF THAT CLASH WILL COME NEW VALUE AND OUT OF THE CLASH WILL

COME NEW WAYS WHERE SOCIETY IS CHANGING IN TERMS OF WHAT THEY SLEW FUNDAMENTAL PRIVACY IS. IF SOMEBODY WANTS TO KNOW I'M ON MED FORM IN GENEVA I DON'T CARE BECAUSE IF I CAN FIND OTHER PATIENTS HIKE ME AND HOW THEY'RE TREATING DIABETES, THAT'S GOING TO HELP ME.

WHAT WE'RE SEEING IS A CLASH WHERE ONE IS COMING AT A PURE USABILITY STANDPOINT AND ONE FROM A REGULATORY STOOD PRIVACY INSCRIPTION AES BLAH, BLAH, BLAH AND THE TWO ARE COMING TOGETHER AND I THINK THAT'S WHERE THE NEXT FIVE YEARS WILL BE GOING AND THE NEXT BIG STEP IN INNOVATION IN VALUE WILL BE CREATED.

>> JUST FOLLOWING UP ON THAT, AND ANY OF THE OTHER OF YOU, IF YOU HAVE ANY INPUT ON THIS, WHEN CONSUMERS DO CHOOSE TO SHARE THEIR ATTEMPT AND EXPERIENCES WITH OTHERS VIA SOCIAL MEDIA AND OTHER WAY, HOW DOES THAT AFFECT PRIVACY OVERALL?

>> IT ELIMINATES IT.

I MEAN, IT'S -- I GET THE QUESTION ALL THE TIME.

WHY CAN'T YOU MAKE MY KIDS INSULIN PUMP TALK TO THE I ZONE TWEET OUT HIS VALUES.

WELL, BECAUSE I DON'T WANT THE WHOLE WORLD KNOWING WHAT YOUR KID'S BLOOD SUGAR IS.

THAT'S WHY.

AND WE HAD THIS DISCUSSION ON OUR -- THE DISCUSSION ABOUT OUR PANELISTS BEFORE TODAY WHICH WAS THAT THERE'S THIS ELEMENT OF PRIVACY THAT YOU END UP -- IT'S NOT THAT PRIVACY IS PURE AND EVERYBODY GETS 100 PERCENT OF THEIR PRIVACY.

CONSUMER INVESTIGATION TO MAKE A CHOICE.

YOU KNOW YOU'RE GIVING UP A PIECE OF YOUR PRIVACY IN ORDER TO GET SOMETHING ELSE.

IT'S NOT ZERO SUM GAME.

LIKE HE SAID HE IS WILLING TO GIVE UP SOME OF HIS PRIVACY.

YOU CAN KNOW SOME OF MY MEDICAL CONDITION BUT IF I SHARE THAT I CAN GET SOMETHING OUT OF IT.

IT'S NOT A QUESTION AND I THINK THAT IS SOMETHING THAT IS IMPORTANT FROM AN FT

DR. PERSPECTIVE IS THAT DURUMS NEED TO HAVE THE PERSPECTIVE TO MAKE THE BEST CHOICE THEY CAN IF THEY BELIEVE THEY HAVE 100% PRIVACY AND STILL CAN GET ALL OF THOSE THINGS THEY WILL MAKE A BAD CHOICE BECAUSE THEY DON'T KNOW THEY'RE GIVING UP THAT PROVISION.

I THINK IT'S SOMETHING THAT IS IMPORTANT.

CONSUMERS ARE WILLING TO GIVE UP SOME OF THEIR PRIVATE.

WEE DO IT ALL THE TIME AND POST WHERE WE'RE AT AT FACEBOOK.

IT HELPS US IDENTIFY WHO IS FRIENDS AROUND IN THE AREA AND WHAT YOU'RE DOING AND ALL OF THOSE THINGS.

SO IT'S SOMETHING THAT WE HAVE TO TRAIN OUR MIND FOR HOW WE THINK ABOUT THOSE THINGS.

>> I THINK THIS IS WHERE YOU'RE GETTING IN THE BENEFIT AND I WILL TAKE A NOT QUITE CONTRARY OPINION BUT THE IDEA OF PATIENT ENGAGEMENT IS ONE OF THE BIGGEST BENEFITS THAT WE HAVE FROM THE CONNECTED WORLD AND THE ABILITY TO DRAW THE PATIENTS IN, ENGAGE THEM IN THEIR OWN CARE, GIVE THEM REALTIME DATA OR FEEDBACK

ON INFORMATION FROM THEIR
INSULIN PUMPS OR THEIR IMPLANTED
CARDIAC IF THINGS LIKE THAT IS
WHERE WE HAVE TO GO NEXT TO PULL
THEM IN AND ENGAGE THEM IN THAT
WORLD.

AND YOU'RE RIGHT.

THERE WILL BE A -- THE GIVINGFUL
SOME PRIVACY IN THAT WORLD.
SECURITY IS STILL THE TABLE
STEAKS.

J, YOU SAID THAT IN THE
BEGINNING WE HAVE TO HAVE
SECURITY HERE SO WHEN THE
SHARING IS DONE, IT'S DONE WITH
FULL KNOWLEDGE AND
UNDERSTANDING.

BUT ENGAGING THE PATIENT IS
CLEARLY THE NEXT FRONTIER AND
THE DEVICES AND SENSORS NOW WILL
MAKE IT POSSIBLE TOO ENGAGE THE
PATIENT IF REALTIME DECISION
MAKING.

>> SO JAY YOU BRING UP THE ISSUE
OF CONSUMER UNDERSTANDING AND I
WANTED TO FOLLOW UP ON THAT.

>> HOW MUCH DO YOU THINK -- THIS
IS TO ALL OF THE PANELISTS, HOW
MUCH DO YOU THINK CONSUMERS THAT
USE THESE DEVICES REALLY
UNDERSTAND ABOUT WHAT IS
HAPPENING WITH THEIR INFORMATION
AND HOW IT IS BEING USED AND
SHARES?

AND DOES YOUR ANSWER CHANGE
DEPENDING ON WHETHER IT'S
MEDICAL DEVICE OR A MARCH CASUAL
WEARABLE FITNESS DEVICE?

>> WELL, I MEAN -- I CERTAINLY
THINK THAT PEOPLE -- IT'S VERY
HARD TO KNOW, EVEN IF YOU'RE AN
EXPERT, EVEN IF YOU KNOW HOW TO
JAIL BREAK OR ROOT A PHONE AND
PUT A MAN IN THE MILD PROXY TO
SEE WHAT IS GOING ON, IT'S
HAZARD TO KNOW WHAT ANY OF THESE

APPS RESTRAINING ORDER DOING.
AND THERE'S GREAT COMPUTER
SCIENCE RESEARCH, AT CMU THEY
HAVE SOMETHING CALLED "PROTECT
MY PRIVACY "COME ASK ME IF YOU
NEED A POINTER TO IT, AND THEY
FOUND A NUMBER OF CASES WHERE
APPS WERE DOING THINGS THEY
DIDN'T EVEN KNOW THE APPS WERE
DOING BECAUSE THEY WERE
INCLUDING 5ED A LIBRARIES THAT
WERE COMPUTING ON YOUR CONTENT
INFORMATION AND THROWING THAT UP
AND I'M CERTAIN THAT IS
HAPPENING IN HEALTH, TOO, NOT
BECAUSE OF IGNORANCE OR WILFUL
IGNORANCE OR ANYTHING LIKE THAT
BUT THESE THINGS CAN BE SO
EASILY COMPLEX, COME MEX AND SO
EASILY SO THAT YOU END UP HAVING
A WHOLE SET OF THINGS THAT MAYBE
THE APP DEVELOPER DOESN'T EVEN
KNOW MIST HAPPENING AND THAT'S
WHY IT IT WOULD BE NICE IF THERE
IS SOME NECKNISM FOR TEACHING
USERS AND APP DEVELOPERS LOOK
THIS IS WHERE YOUR STUFF IS
GOING.

I KNOW THE MOBILE APP TRAPS
PAIRNS CODE OF CONDUCT EFFORT
MADE A VALIANT EFFORT AT GETTING
TO A SET OF SCREENS THAT
WOULD -- THAT MOBILE APP MAKERS
WOULD HAVE TO, YOU KNOW, SHOW AT
SOME POINT THAT HERE IS WHAT WE
COLLECT AND WHO WE SHARE DATA
WITH AND WE AND TEST THEM AND
MAKE SURE PEOPLE NOPE WHAT
THEY'RE DOING, RATHER THAN THE
FAMILIAR RETRAIN OF PRIVACY
POLICY MEANS MY PRIVACY IS THE
PROTECTED.

NO.

IT MEANS THEY ARE TRYING TO
EXPLAIN TO YOU WHAT THEY DO TO
PROTECT YOUR PRIVACY.

>> SCOTT NO.

>> I THINK THE REAL ANSWER IS THAT WE DON'T KNOW WHAT CONSUMERS KNOW AND DON'T KNOW ABOUT A LOT OF THESE DEVICES BECAUSE THERE'S BEEN VERY LITTLE SO FAR TO TRY TO FIND OUT ALTHOUGH THERE ARE SOME STUDIES. BUT DO I HAVE SOME CONCERNS. MY BIGGEST CONCERN IS, I DON'T THINK THAT CONSUMERS HAVE REALLY FIGURED OUT YET THE KINDS OF INFERENCES THAT CAN BE DRAWN FROM DISPARATE TYPES OF DATA. ONE STUDY AT THE UNIVERSITY OF WASHINGTON SHOWED CONSUMERS WERE VERY CONCERNED ABOUT LOCATION DATA AND GPS DATA AND DIDN'T LIKE THE IDEA THEY WOULD BE CONTINUOUSLY MONITORED FOR LOCATION BUT THEY HAD ESSENTIALLY NO CONCERN ABOUT 24/7 RECORDING OF THE ACCELEROMETER DATA OF THE UNITS THEY WERE WEARING.

IF YOU HAVE 24 HOURS OF ACCELEROMETER DATA YOU CAN FIGURE OUT WHERE SOMEBODY IS EASILY BECAUSE IF YOU'RE DRIVING DOWN THE ROAD WITH AN ACCELEROMETER, EACH ROAD IS UNIQUE IN THE WAY IT TRIGGERS YOUR ACCELEROMETER'S READING SO THERE'S A DISCONNECT.

THEY'RE SAYING ONE KIND OF DATA I'M WORRIED ABOUT AND THE OTHER NOT AT ALL AND THE TWO TYPES OF DATA SUPPORT THE SAME INFERENCES.

I THINK THAT'S WE'RE GOING TO SEE THAT INCREASING ACROSS DIFFERENT SENSORS INCLUDING HEALTH SENSORS.

>> TO ME, THE QUESTION ABOUT CONSUMERS AND THE PRIVACY, I ACTUALLY THINK -- I AGREE WITH

JOE IS THAT, THAT'S ALMOST A QUESTION THAT YOU NEED TO GO A HIGH EVER LEVEL UP.

THE COMPANIES PRODUCING THESE DEVICES DON'T EVEN KNOW WHAT THE PRIVACY ISSUES R YOU KNOW THE IMPLICATIONS WHAT WHAT THEY'RE RECORDING AND HOW IT CAN BE USED AND THE EXAMPLE OF THIS IS, I'M WORKING WITH A CUSTOMER THAT USES MEDICAL DEVICES AND HE LIKE, WHAT ABOUT CONNECTING THE MEDICAL DEVICE TO THE CAR OVER BLUETOOTH AND I'M LIKE, OKAY, WHAT ARE YOU THINKING? HE IS LIKE, IT WOULD BE HELPFUL BECAUSE YOU COULD SEE YOUR MEDICAL STATUS WHILE DRIVING AND DON'T HAVE TO LOOK DOWN FOR THEM.

I SAID, OK.

I'M LIKE AND I'M THINKING, YOU COULD ALSO DO OTHER THINGS AND YOU WILL HEAR IN THE NEXT PANEL ABOUT ALL OF THE CRAZY THINGS BEING DONE, WITH MY RESEARCH SKILLS, WITH CARS.

SO IF YOUR BLOOD GLUCOSE GETS TO LOW WHY DON'T I TURN THE CAR OFF.

WHAT IF I SURREPTITIOUSLY TOLD THE CAR YOUR BLOOD SUGAR WAS LOW AND HE WENT NEVER MIND.

SO THINKING THROUGH SOME OF THESE THINGS AND THROUGH THE PRIVACY AND SECURITY MEASURES, CONSUMERS WANT EVERYTHING TO BE CONNECTED AND COMPANIES WANT TO GIVE THEIR CONSUMERS AND THEIR CUSTOMERS EVERYTHING THAT THEY WANT BUT THAT'S NOT WHAT WE NEED TO DO, YOU KNOW, AND WE NEED TO TAKE A SECOND AND THINK ABOUT THE APPLICATIONS OF THAT -- THE IMPLICATIONS OF THAT FROM A SECURITY AND PRIVACY PERSPECTIVE

WE JUST CAN'T CONNECT EVERYTHING
TO EVERYTHING AND EVERYTHING
WILL BE GREAT.

WE HAVE TO FIGURE OUT HOW LIT
PLAY OUT AND HOW THINGS WILL BE
USED.

SO IT'S A VERY GOOD QUESTION AND
WE'RE GOING REALLY, REALLY FAST,
FROM A TECHNOLOGY PERSPECTIVE
AND JUST NOW WE'RE STARTING TO
SEE SOME OF THE DANGER OF THINGS
FROM THE MEDICAL DEVICE, FROM A
CAR, AND NOW WE WANT TO MIX
THESE THINGS TOGETHER?

MAYBE NOT A GREAT IDEA.

>> I WILL SHARE WITH YOU KIND OF
OUR LAST, I DON'T KNOW, SIX
YEARS, OF OBSERVATION AND
SEVERAL THOUSANDS OF PATIENTS
AND FOR ME, THE ANSWER LIES IN
ITS AN EVOLUTION THAT INVOLVES
TRANSCENDING SEE AND EDUCATION
FOR THE CUSTOMER AND THE
CUSTOMER COULD BE THE HEALTH
PLAN, IT COULD BE THE DOCTOR OR
THE PATIENT OR CAREGIVER OR IT
COULD BE ANYBODY WHO IS A
STAKEHOLDER IN THAT ECOSYSTEM.
SO IF YOU LOOK AT DATA AND YOU
LOOK AT TWO DIMENSIONS OF DATA,
THERE'S ONE OF THE ACTUAL
PRESENCE AND ABSENCE OF DATA.
PRESENCE AND ABSENCE.

SO THIS TO VERTICAL DIMENSION IS
I KNOW MY ANALYSIS INTENT.
I KNOW MY ANALYSIS INTENT AND I
DON'T.

PLAY OUT THOSE FOUR QUADRANTS.
THE BOTTOM SAYS I HAVE DATA AND
I KNOW WHAT I'M LOOKING FOR.

THAT'S BASIC MATH 101.

PATIENTS WANT TO KNOW THAT STUFF.
SHOW ME HOW MANY TIMES I WAS IN
RANGE, OUT OF RANGE OR THAT I
SKIPPED MY MEDS.

THEY KNOW YOU'RE CAPTURING CAPTURING AND

THEY KNOW YOU'RE GOING TO REPORT
ON THAT. IT'S FUNDAMENTAL.

101.

NOW GO TO THE RIGHT.

I KNOW MY ANALYSIS INTENT BUT I
DON'T HAVE THE DATA.

WE CALL THAT DISCOVERY,
PREDICTIVE MODELING FOR THE
MATHEMATICIANS IN THE CROWD IT'S
BAJIAN-MARTOF, THEY THAT KIND OF
STUFF.

AND I WOULD HIKE TO TELL A
PATIENT NEXT WEEK TO THE NEAREST
DAY AND HOUR HOW WILL YOU WILL
GO HYPOGLYCEMIC.

THE BIGGEST COST IS UNNECESSARY
HOSPITALIZATIONS DUE TO
HYPOGLYCEMIA.

WE HAD A PRESS ANNOUNCEMENT LAST
WEEK WHERE WE PUBLISH ADD PAPER
AND I COULD PREDICT IT DOWN TO
93 PERCENT WHICH IS PRETTY DAM
GOOD, BETTER THAN NOT KNOWING AT
ALL, RIGHT?

AND THE PRESCRIPTION SAYS, YOU
DON'T HAVE THE DATA BUT YOUR
GOING TO TELL ME SOMETHING OF
DATA SOME SOME PEOPLE MAY FIND
IT VALUABLE.

SOME PEOPLE SAY THAT'S FINE I
DON'T NEED TO KNOW THAT THAT.
THIS QUADRANT SOAZ I HAVE THE
DATA BUT I HAVE NO IDEA WHAT I'M
LOOKING FOR.

DO YOU KNOW HOW MANY PATIENTS WE
FOUND ON BIYADA?

IT ONLY WORK WHEN YOU EAT.

THE DOCTOR SAYS TO TAKE IT AT
BREAKFAST AND DINNER.

BUT THEY'RE A BREAKFAST SKIPPER
AND DOCTORS ARE WONDERING WHERE
THE HELL ISN'T THIS WORKING?

IT SHOULD.

MEANWHILE THE THIRD DAY THIS
HAPPENS THE SYSTEM WAKES UP AND
SAID, RULE TAKING THEIR MEDICINE

BUT NOT RECORDING THEIR CARBS.
DID YOU KNOW IT ONLY WORKS WHEN
YOU EAT.

TALK TO YOUR DOCTOR ABOUT
SWITCHING.

THE DOCTOR SAYS I WROTE AT
BREAKFAST AND WINTER AND I MEANT
WITH BREAK PAST AND DINNER.

THERE'S 18,000 ARTICLES ABOUT
PATIENT-PHYSICIAN DISCORD ANS.
YOU SHOULD USE THAT DATA TO
CAPTURE -- SUDDENLY PATIENTS ARE
TAKING THEIR BITE AND ITS
WORKING.

THINK OF WHAT THE VALUE
PROPOSITION IS TO CMS AND THE
MEDICARE PROPOSITION.

AND THE LAST IS ADAPTIVE.
YOU DON'T HAVE THE DATA AND
DON'T KNOW WHAT YOU'RE LOOKING
FOR BUT YOU COLLECT IT OVER
TIME.

I THINK IT'S IN EVOLUTION AND
FOR FOR ALL INTENTS AND
PURPOSES, WE'RE IN THAT ENVELOPE
RIGHT NOW AND I THINK WE ARE
STARTING TO HER AS WE GO ALONG.

>> SEVERAL PEOPLE NOTED CHOICE.
WHAT ARE THE OTHER SIGNIFICANT
PRIVACY AND SECURITY CONCERNS
THAT YOU ALL ARE SEEING IN THE
HEALTH AND FITNESS REALM?

>> I THINK ONE OF THE RISKS THAT
WE HAD IS THAT MORE WILL BE
KNOWN ABOUT YOUR HEALTH BY
OTHERS THAN BY YOU AND THEN HOW
THEY USE THE INFORMATION ABOUT
YOU IS A RISK, RIGHT?

THAT'S A CONCERN.

SO IF THERE'S NO NORM ON, YOU
KNOW, WHAT USE CAN BE MADE OF
DATA, OTHER THAN A CONSENT FORM
THAT YOU MIGHT SIGN, THAT COULD
BE VERY BROAD THEN WHAT OTHERS
KNOW ABOUT YOUR HEALTH CAN HAVE
AN IMPACT ON YOU IF YOU'RE NOT

AWARE OF IT.

>> I GUESS, SOMETHING ELSE I MENTIONED JUST BRIEFLY IS, THERE'S A LOT YOU CAN DO WITHOUT SORT OF RAW GRANULAR STUFF. YOU CAN KEEP THAT ON THE DEVICE, CALCULATE ANING A GREG GATES STATISTIC AND SHARE THAT WITH THE PROVIDER AND THAT CAN HELP YOU MOVE AWAY FROM A PLACE WHERE YOU KNOW SO MUCH ABOUT SOMEONE THAT YOU -- YOU CAN PUTS THEM IN DANGER FOR WHATEVER REASON. AND I WOULD LIKE TO SEE MORE -- I GUESS THAT'S AN OPPORTUNITY RATHER THAN ANOTHER OF THE LITANY OF PROBLEMS THAT WE SEE TODAY WHICH I THINK WE COVERED PRETTY WELL, I DON'T THINK THERE'S AN OPPORTUNITY FOR DOING CLIENT SIDE STUFF AND SOME PEOPLE ARE DOING THAT AND SOME DEVICES HAVE TO DO THAT BECAUSE THEY DON'T HAVE ENOUGH POWER TO DO MORE COMPLICATED KINDS OF STUFF, AND INCREASINGLY, YOU HAVE MORE POWER ON THE DEVICES WHICH MEANS COLLECT IT TALL AND SEND IT ALL WHICH I THINK IS -- WE SHOULD THINK ABOUT THAT AND THINK CAREFULLY ABOUT HOW MUCH YOU NEED AND HOW MUCH YOU'RE SENDING AND HOW MUCH YOU'RE COLLECTING.

>> I THINK THERE'S A COUPLE OF DIFFERENT THINGS. I MEAN, ONE, IT MAY SEEM TRIVIAL BUT I DON'T THINK IT IS TRIVIAL. ONE OF THE BIGGEST CONCERNS FOR CONSUMERS AT THE MOMENT IS THEY JUST WASN'T A COPY OF THE DATA. SO YOU KNOW, A STUDY -- 2013 STUDY TRYING TO FIGURE OUT WHAT WERE ALL OF THE CONCERNS ABOUT FITNESS DEVICES, THE NUMBER ONE IS I CAN'T GET THE ATTEMPT, I

DON'T WANT TO SEE MY OWN DATA.
IT TURNS OUT IF YOU TAKE THE
TIME TO READ A BUNCH OF THESE
PRIVACY POLICIES SOME OF THEM
SAY IT'S YOUR DATA, SOME OF THEM
SAY IT'S OUR DATA AS THE FIRM,
SOME OF THEM DON'T SAY ANYTHING
ABOUT WHOSE DATA IT IS OR WHAT
ACCESS YOU MIGHT HAVE AND HOW.
SAY LOW-COST CONSUMER COMPANIES ARE
GIVING CONSUMERS ACCESS TO SORT
OF AGGREGATED ANALYZED DATA OF
THIS WAS SORT OF YOUR HEART
OPERATE AND THE NUMBER OF STEPS
THAT YOU TOOK YESTERDAY OR
WHATEVER.
BUT NOT ACCESS TO THE ACTUAL RAW
INFORMATION.
AND IF YOU WANT TO PORT IT TO
SOME OTHER PLATFORM OR YOU WANT
TO ANALYZE IT OR SHARE WITH
SOMEONE, THAT'S JUST ONE BASIC
CONCERN ANOTHER ONE, I THINK IF
YOU'RE -- YOU SAID OTHER THAN
DISMITS CHOICE, 21 OF THE BIGGEST
ONES IS USE, DRAWING LINES
AROUND ACCEPTABLE USE WHICH
WE'RE VERY UNCOMFORTABLE TALKING
ABOUT IN A LOT OF THE PRIVACY
WORLD BUT, FOR EXAMPLE, CAN AN
INSURER REQUIRE AS A CONDITION
OF CAR INSURANCE THAT IF YOU
HAVE AN ACCIDENT IN THE FUTURE,
ANYWAY HAVE ACCESS TO THE BLACK
BOX DATA COMING OUT OF YOUR CAR?
THE ANSWER IS, WELL, IT DEPENDS
ON WHERE YOU LIVE.
SO IN A FEW STATES THE ANSWER IS
NO.
A FEW STATES HAVE SAID AN INSURER
COULD NOT DO THAT AS A
CONDITION OF YOUR EXPERIENCE.
MOST STATES HAVE SAID NOTHING.
THE FEDS HAVE SAID NOTHING.
THAT'S A REALLY HARD QUESTION
AND YOU CAN STRAP HATE FROM

THAT TO OTHER KINDS OF -- YOUR
EXTRAPOLATE FROM THAT TO OTHER
KINDS OF INSURANCE.

I LOVE THE GENERAL ELECTRIC
COMMENT OF YOUR STOVE TELLING
YOUR STOVE YOU'RE LEAVING YOUR
STOVE ON AND I'M SURE MY INSURER
WOULD LIKE TO KNOW THAT.

IF I WAS ROUTINELY DOING THAT,
COULD THEY AS A CONDITION OF MY
INSURANCE REQUIRE ME TO HAVE MY
APPLIANCES SHARE THAT
INFORMATION WITH THEM.

THAT'S NOT GENERAL ELECTRIC'S
PROBLEM BUT IT IS A POLICY
PROBLEM THAT IS REALLY QUITE
REAL.

AND THAT WE JUST HAVE NOT
WRESTLED WITH, I DON'T THINK,
AND AGAIN YOU MAY NOT SEE IT AS
A PRIVACY PROBLEM WERE SAY.

YOU HAVE MAY SEE IT AS AN
ECONOMIC POWER QUESTION.

AND THE LAST THING I WILL SAY,
COMMISSIONER BILL ASKED THE
QUESTION THIS MORNING ABOUT THE
ECONOMIC DIVIDE, HOW IS THIS
GOING TO PLAY OUT, RIGHT? I
SORT OF AGREE WITH HIM, I'M NOT
SURE THIS IS A PROBLEM OF AN
ECONOMIC DIVIDE HIKE THE POOR
AREN'T GOING TO BE ABLE TOO GET
ENOUGH SENSORS.

I THINK THE POOR ARE LIKELY TO
HAVE SENSORS IMPOSED ON THEM
MORE THAN ANYBODY ELSE.

THE PEOPLE IN THIS ROOM, I DOUBT
MOST OF YOU, EVEN IF YOU HAVE AN
EMPLOYER, WHICH MANY OF YOU
DON'T WHICH YOU'RE FUN INTERNET
FREELANCERS BUT THE ONCE THAT
DO, I DOUBT YOU'RE IN A JOB
WHERE AN EMPLOYER IS LIKELY TO
IMPOSE THAT THEY YOU TO WEAR A
SENSOR OR YOU'RE GOING TO GET
FIRED BUT THERE ARE LOTS OF JOBS

WHERE THAT IS INCREASINGLY HAPPENING, IF YOU DOUBT THAT READ A NEW ARTICLE IN THE ATLANTIC THAT CAME OUT YESTERDAY ABOUT TRUCKERS WHO ARE INCREASINGLY BEING MONITORED, LONG HAUL TRUDGERS BEING MONITORED, WATCH THE PERSON WHO CLEANS YOUR GROCERY STORE AND WHO EVERY TIME THEY GET TO THE END OF THE AISLE THEY HAVE TO SWIPE THEIR WRIST AGAINST THE END OF THE AISLE WHERE THERE'S A SCAN EVER.

THIS KIND OF MONITORING IS VERY UNCOMFORTABLE FOR PEOPLE IN THE EMPLOYMENT CONTEXT BUT IT'S HERE AND GETTING YOU KNOW, MORE AND MORE DEVELOPED, SO THOSE KINDS OF PRIVACY QUESTIONS, I THINK, PROSECUTE HARD AND WE'RE GOING TO HAVE TO DEAL WITH THEM.

>> I MEAN I LOVE THE IDEA OF THE APPROPRIATE USE OR THE CONTEXT BECAUSE IT REALLY IS THE ONLY WAY THAT WE'RE GOING TO BE ABLE TO MANAGE ALL OF THE ENORMOUS AMOUNTS OF DATA COMING IN FROM ALL KINDS OF DIFFERENT YARIS AND WE HAVE REGULATORY MODELS NOW THAT ARE BASED ON THIS, THE FCRA IS BASED ON THAT AND IT SETS A RING FENCE UP AND SAYS THESE PEOPLE ARE APPROPRIATE, THEY HAVE GONE THROUGH SECURITY CRITERIA AND THEY CAN ACCESS THE DATE FOR THESE DEFINED USES AND THESE USES EASTER HERE ARE IMPERMISSIBLE.

THERE'S ACCESS TO THE ATTEMPT AND HOW YOUR INFORMATION IS USED AND IT'S A MODEL THAT IS WORKABLE AND IT IS BASED ON AN ACCEPTED USES THAT WERE DETERMINED, YOU KNOW, DEALING WITH EXPERTS SO I DO THINK THAT

YOU KNOW, WHAT SCOTT SUGGESTS,
AS A MODEL THAT WE WILL HAVE TO
SERIOUSLY ENGAGE IN.

>> WHAT DO YOU THINK ABOUT USE RESTRICTIONS?

>> ANY OTHER THOUGHTS?

>> THAT THEY'RE GOOD.

>> I MEAN.

>> GO AHEAD.

>> I WAS GOING TO SAY ONE OF MY
COLLEAGUES IS IN THE ROOM AND
ONE OF MY BOSSES, WROTE A PAPER
RECENTLY ABOUT THINGS --

IMPLICATION -- PRIVACY

IMPLICATION BEFORE ANY USE IS
MADE AND ONCE COLLECTION
HAPPENED NO ONE HAS TOUCHED IT
AND THERE ARE STILL SOME
IMPLICATIONS OF HAVING SAWS TO
THAT STUFF AND THAT'S WHERE I
GET YOU BEFORE I TALK ABOUT USE
RESTRICTIONS BUT USE

RESTRICTIONS AS LONG AS THEY
HAVE TEETH, THAT'S WHY VANILLA
SELF REGULATORY EFFORTS ARE
MOBILE FROM THE ANSWER.

YOU NEED TO HAVE SOMETHING
ENFORCED BY AN INDEPENDENT BODY
AND THE FTC IS GOOD OR AT LEAST
THIS APPLICATION IS, THEY HAVE A
HISTORY OF DOING CONSUMER-BASED
ACTIONS, THEY HAVE A GROWING
TECHNICAL EXPERTISE, AND ANYWAY,
SO I THINK THAT, AS LONG AS IT
HAS TEETH AND IT DOESN'T

SOMETIME THINGS GO TOO FAR TO THE
EXTENT THAT PEOPLE CAN ACCEPT
IT, AND THAT FOLKS LIKE US CAN
SAY, YEAH, WE THINK THAT IS --
IT PROMOTES INNOVATION TO A
EXTENT, IT'S NOT FREE FOR ALL
BUT AT THE SAME TIME IT PUTS
REAL RESTRICTIONS THAT MEAN
SOMETHING AND IT HAS REAL TEETH
BEHIND IT, THAT WOULD MAKE ME
HAPPY.

>> OK.

WE HAVE ONE QUESTION FROM THE AUDIENCE.

THE EU IS CONSIDERING NARROWING RULES AROUND CONSENT AND COMPATIBLE USES.

WHAT EFFECT WOULD COMPLICIT CONSENT FOR EXPLICIT DATA HAVE ON HEALTH CARE AND RESEARCH?

>> YOU WILL HAVE TO ASK THE QUESTIONER A CLARIFYING QUESTION.

SO THE CONSENT STUFF IS NOT NECESSARILY THE HEALTH DINNER IN FACT THEY'RE SCALING BACK CONSENT FOR PUBLIC HEALTH USES SO MAYBE THEY'RE TALKING ABOUT THE CONSUMER HEALTH STUFF.

>> LET'S GO ON THAT ASSUME SHIN.

>> THAT'S JUST ME CLARIFYING.

I DON'T HAVE AN ACTUAL OPINION ON IT.

CLARIFYING WEEP DON'T KNOW.

>> PEOPLE ARE MAD ABOUT TAKING CONSENT AWAY FROM THE HEALTH CONTENT.

>> THIS IS ONE OF THE CONUNDRUMS, IF HAVE YOU A BUNCH OF DIFFERENT SENSORS ON A BIRCHLT MP BUNCH OF TWICE ON YOUR HOME, CAR, BODY, THAT ARE MEASURING THINGS THERE'S NO WAY YUKON SENT EVERY TIME THE SENSORS RECORDS SOMETHING ABOUT YOU OR ELSE THEY'RE NOT GOING TO BE USEFUL.

THAT IS JUST WHAT TACTICALLY PRAGMATICALLY PUTS PRESSURE ON CONSENT AS THE SOLUTION HERE.

>> THERE MAY BE TECHNICAL SOLUTIONS.

I'M SORRY.

I'LLING QUICK.

SOMETHING I WOULD LIKE TO SEE EXIST SOMETHING I PUT ON MY HOME NETWORK BEFORE MY CABLE, ROUTER,

DSL MODEM OR WHATEVER, THAT
ALLOWS ME IN BULK TO ANOINT
CERTAIN KINDS OF DATA THAT FLOWS
FORTH FROM MY HOUSE.

SO THAT'S A WAY OF SORT OF
AGGREGATING CONSENT LIKE STUFF.
SOUNDS LIKE DO NOT TRUCK OR
OTHER THINGS LIKED A IDENTIFIERS
AND THINGS TO HIKE THAT PUT YOU
WOULD NEED SOME BASIC STANDARDS
SO THAT TELEHEALTH COMPANIES OR
COMPANIES THAT DO ANYTHING
RELATED TO INTERNET OF THINGS
COULD MARK CERTAIN PACKETS AND
SAY HERE IS WHAT YOU COULD TRY
TO DO TO YOU COULD PRECLUDE DATA
FROM FLOWING FORWARD.

IT'S NOT PERFECT SOLUTION BUT IT
MIGHT HAPPEN.

I THINK EXPLICIT CON SENT WOULD
BE CATASTROPHIC.

IT WOULD SHUT DOWN INNOVATION
AND TREATMENT.

IT'S JUST -- BEYOND PRACTICAL,
IT'S ALSO UNETHICAL.

BIOETHICIST AND OTHERS HAVE
LOOKED AT CONSENT AND SAID, IF
THIS IS THE VANGUARD, IF THIS IS
WHAT IS GOING TO KEEP
IMPERMISSIBLE USE FROM OCCURRING
THIS ISN'T AN ETHICAL CONSTRUCT.

TO EXPECT THE PATIENT
UNDERSTANDS THE FULL SCOPE OF
USE, THE FULL SCOPE OF RISK AND
THEY'RE DETERMINING, YOU KNOW,
BASED ON THEIR LEMENTED
UNDERSTANDING WHERE -- LIMITED
UNDERSTANDING WHETHER USE IS
APPROPRIATE THEY WILL TRUST THE
DOCTOR AND ALMOST ALWAYS GOING
TO SAY YES AND THE ANSWER IF
THEY KNEW THE RISK SHOULD BE
KNOW.

AND SO THE IDEA OF CONSENT IN
HEALTH CARE IS REALLY, FOR A
DATA USE IS REALLY THE ONLY

THING TO WE'RE GOING TO STAND ON
IS JUST NOT AN ETHICAL
CONSTRUCT.

>> ONE OF THE OF THE THINGS THAT
I THINK ABOUT WHEN I THINK OF
THAT IS THAT WE DON'T HAVE TO GO
VERY FAR BACKWARDS TO SEE HOW
USER AGREEMENTS AND ACCEPTABLE
LICENSES HAS JUST BEEN
IGNORED -- HOW MANY OF YOU READ
THE I TUNES LICENSE WHEN YOU
INSTALLED IT?
NOBODY.

IT'S PRETTY LIMITED.

IF YOU HAVE INSOMNIA, GO FOR IT.
BUT ANOTHER EXAMPLE WOULD BE
WHEN I BROUGHT THE SOMEHOW TO AN
AMUS ABOUT THE SOFTWARE BUG AND
THANK YOU SAID IT'S NOT A BUG,
IT'S A FEATURE.

IT'S IN YOUR MANUAL.

AND I SAID ARE YOU KIDDING ME?
AND I PUT OUT THE 472 PAGE
MANUAL AND SURE ENOUGH THERE WAS
A SENTENCE ON PAGE 74 ABOUT
THIS.

AND I WAS LIKE, REALLY, IT'S A
472 PAGE MANUAL THAT I GUARANTEE
YOU 98 PERCENT OF THE USERS
HAVEN'T READ.

THAT'S WHAT USERS AGREEMENTS AND
LICENSES HAVE BECOME IS, IT'S A
JOKE.

IF YOU WANT EXPLICIT PERMISSION,
YEAH, WHATEVER, I ACCEPT.
JUST INSTALL THE DAMN THING SO I
CAN GET WHAT I NEED TO GET OUT
OF IT.

SO IT'S REALLY KIND OF A FALSE
SOLUTION, AND YOU NEED TO LOOK
AT WHAT HAS BEEN TRIED BEFORE
AND SAY, IF WE DON'T WANT TO GO
DOWN THAT PATH WE HAVE TO COME
UP WITH SOMETHING NEW, NOT TO
RECYCLE BAD IDEAS THAT HAVE BEEN
USED BEFORE.

>> AND BEFORE WE GET OFF NOTICE OR CONSENT, TWO THINGS. ONE, AS OPPOSED TO THE 400 SOME ODD PAGE MANUALS, PRIVACY POLICIES ON MOST FITNESS DEVICES I HAVE LOOKED AT ARE UNBELIEVABLY SHORT AND LEAVE OUT HUGE AMOUNTS OF INFORMATION THAT I AS A CONSUMER WOULD WANT TO KNOW, HALF-HEARD ONES I SURVEYED DIDN'T SAY ANYTHING ABOUT THE ACTUAL HEALTH -- WELL I CAN'T SAY HEALTH DATA BUT THE DATA ABOUT PHYSICAL STATE THAT THE DEVICE WAS RECORDING OR CAPTURING. THEY JUST SAID THINGS ABOUT USE OF THE WEB SITE. WHICH IS A TOTALLY DIFFERENT KIND OF DATA AND NOT NECESSARILY WHAT THE CONSUMER WOULD ACTUALLY WANT TO KNOW ABOUT. SO WE'RE AT A VERY EARLY STAGE IN THE NORM CREATION AROUND WHAT SHOULD THOSE PRIVACY POLICIES TALK ABOUT. THE OTHER THING I WILL SAY AND I WILL JUST INJECT THIS. OTHERWISE I'M NOT GOING TO HAVE A CHANCE. I DON'T SEE HOW CONSUMERS CAN BE CONSENTING AND UNDERSTANDING THE RISK THEY'RE UP AGAINST AT THE MOMENT WHEN, IF ONE OF THESE COMPANIES IS HACKED, WHICH WE HAVE HEARD ALL DAY THEY CAN BE, AND, YOU KNOW, ALMOST ALL OF THE -- ALMOST ALL OF THE DEVICES I KNOW ABOUT WHERE A GOOD EXAMPLE PEPPER HAS TRIED TO HACK THEM, THEY HAVE BEEN ABLE TO. IF ANY OF THESE CONSUMER DEVICES ARE HACKED NONE OF THESE ARE SUBJECT TO THE STATE OR FEDERAL DATA BREACH DISCLOSURE LAWS AND

I LOOKED AT EVERY STATE DATA
BREACH DISCLOSURE LAW THIS
SUMMER AND GUESS WHAT, NONE THV
THEM APPLIES.

MAYBE TEXAS.

MAYBE NEBRASKA, TO THE DATA
COMING OFF OF YOUR FIT BIT.

I THINK A FIT BIT GETS HACKED
AND THEY STEAL A HUNDRED
THOUSAND USERS FIT BIT DATA, THE
PUBLIC SHOULD KNOW THAT.

IF I HAD A MAGIC WAND, FIRST
THING I WOULD DO IS AMEMORIAL
DAY THE DEFINITION IN THE
DISCLOSURE LAWS AND SAY, HEY,
CONSUMERS HAVE A RIGHT TO KNOW
WHEN THIS INFORMATION GETS OUT
SO AT LEAST THEIR CONSENT MEANS
A LITTLE BIT IF TAKEN THEY'RE
DOING BUSINESS WITH A COMPANY
THAT HAS LOS ANGELES SECURITY
AND IT HAS -- THAT HAS LAX
SECURITY AND HAS BEEN BREACHED.

>> CAN YOU READ THIS?

>> IT'S A PAPER CALLED SENSOR
PRIVACY.

>> I WILL SAY ONE THING ABOUT
THE BREACH IDENTIFICATION
BECAUSE I HAVE DEALT WITH THAT
FOR A VERY LONG TIME.

WE V. STARTED TO SEE SOME
FATIGUE IN THAT, FROM THAT
PERSPECTIVE.

INITIALLY PEOPLE WERE LIKE OH,
MY GOD MY DAD HAS BEEN BREACHED.
THE BANK SENT ME HAD A LETTER.
NOW THEY DON'T EVEN OPEN IT.
IT'S BECOME ALERT FATIGUE OF
YEAH WHATEVER.

YOU'RE SENDING ME THESE EVERY
THREE MONTHS BECAUSE BANKS ARE
GETTING POPPED ALL OVER THE
PLACE, THAT INFORMATION IS
PERVASIVE ALL OVER.

SO IT'S A PROBLEM FROM THAT
PERSPECTIVE.

YOU HAVE TO KIND OF TAKE THAT INTO ACCOUNT.
NOT SAYING I DOESN'T WORK BECAUSE I THINK BREACH IDENTIFICATION LAWS, I KNOW THEY HAVE CAUSED BUSINESSES TO CHANGE FROM THE LEGAL VIABILITY STANDPOINT BUT FROM THE CONSUMER STANDPOINT I DON'T THINK THEY HAVE HAD THE IMPACT LONG-TERM THAT WE WOULD HAVE LIKED TO FOR THEM TO HAVE.

>> I KNOW WE TALKED ABOUT APPROPRIATE USE RESTRICTIONS BUT I WANTED TO GET INTO SOME OF THE OTHER PRIVACY AND SECURITY CONSUMER PROTECTIONS THAT MIGHT EXIST.

AND ANAND LET'S START WITH YOU, AS YOU HAVE BEEN DEVELOPING YOUR PRODUCT AND GET YOUR INSIGHTS GLIRS SO WE HAVE A -- SO WE HAVE A FRAMEWORK.

THIS IS ACTUALLY FOR THOSE INTERESTED CHECK THE DIABETES TECHNOLOGY PAPER THAT WE DID THIS APRIL.

BUT SECURITY IS A MULTILAYER -- IT IS MULTILAYER.

IT ALL STARTS WITH THE USE EVER. THERE'S A USER LAYER OF SECURITY.

THERE'S AN APPLICATION LAYER OF SECURITY.

THERE'S AN ENVIRONMENT LAYER.

THERE'S A DEVICE LAYER.

AND THAT WORK LATER.

A SERVICES LAYER.

AND AN INTEGRATION LAYER.

AND I WILL TALK ABOUT EACH ONE BRIEF LIVE.

USERS, WHEN YOU THINK ABOUT IT, IN MANY WAYS, THE NUMBER ONE SORT OF BREACH AND THINGS LIKE THAT ARE USERS.

OO-WHEE! ALWAYS SAY THERE ARE

THREE WAYS OF ENSURING USER SECURITY.

ONE IS MUST HAVE, MUST KNOW, AND MUST OF COURSE.

RIGHT?

THINK ABOUT IT, WE'RE ALL VILE LITTERS.

I FORGOT MY THING IN THE JACKET CAN I BORROW YOUR PASS TO GET BACK IN THE BUILDING? WE DON'T DO THAT AS MUCH WITH PASS BOARDS BUT WE HAVE TO EDUCATE PEOPLE AND EMPLOYEE, ESPECIALLY IN HIPAA COVERED ENTITIES ABOUT WHAT SECURITY REALLY MEANS. AND IT'S NOT A SMALL TASK.

SO THERE'S USER SECURITY.

THERE'S APPLICATION SECURITY.

I MEAN IT'S INTERESTING, WE HAVE GONE THROUGH SEVERAL EXTERNAL AUDAND ITS COMPANIES COMING IN AND DOING PENETRATION TESTING AND TALL THEY SHOULD DO AND WRITING REPORTS AND LOOKING AT VULNERABILITIES AND THE SOFTWARE PATHWAYS WHERE PORTS ARE LEFT OFF AND IT'S OPEN TO HACKS AND WHAT HAVE YOU, IT'S AMAZING. SOFTWARE 101 YOU DON'T CODE THAT WAY.

BUT 90 PERCENT OF THE PEOPLE CODE THAT WAY.

THEY WOULD MISERABLY FAIL SECURITY TESTS SO THE

APPLICATION HAS TO BE SECURITY.

THE ENVIRONMENT IS INTERESTING.

WE ALL HAVE DATA CENTERS.

HOW MANY PEOPLE ACTUALLY HAVE BEST PRACTICES FOR PHYSICAL ELECTRONIC, HUMAN ETC. SECURITY AT THE DATA CENTER.

THEY DON'T.

DEVICES, WE ENCRYPT ON THE

DEVICE, OFTEN THE LINK, WE

ENCRYPT ON THE SERVE HER AND IT MEANS IT'S 2896 BIT, THE

CERTIFIED GOOD STUFF, RIGHT,
WHEN WE HAD THE CHIEF SECURITY
OFFICERS OF THE AIR FORCE AND
DID A PROJECT WITH THEM AND WE
SAID WE WHEIK YOUR SECURITY
ARCHITECT AND THAT IS GOOD BUT
IT HAS TO BE ENCRYPTED THERE
BECAUSE IF I LOSE MY PHONE I
OUGHT NOT HAVE VULNERABILITY FOR
DATA LOUSE MAWS SOMEBODY HAS MY
PHONE.

THE NETWORK -- THERE ARE ALL
KINDS OF WAYS TO SECURE
NETWORKS.

SOME BETTER THAN OTHERS.

AND THEN AT OF THE SERVICE
LAYER, EVERY TOUCHDOWN POINT
WITH THE ITEM KITCHENER THAT IS
TO FOLLOW THE PROPER SECURITY
MEASURES AND PROCEEDINGS AND FOR
US IT'S A COLLECTION OF ALL OF
THESE THINGS THAT DEFINE HOW YOU
FUNDAMENTALLY ARCHITECT YOUR
SECURE SECURITY, THE MEASURES
WHICH YOU MONITOR, AND THEN YOU
PUBLISH, AND THEN YOU
CONTINUOUSLY IMPROVE TO SAY YOU
KNOW WHAT, WE HAVE TO REDUCE
VULNERABILITIES HERE, WE HAVE TO
IMPROVE PROTECTION THERE AND
THAT'S KIND OF HOW WE HAVE
EVOLVED IT OVER TIME.

>> THANKS.

>> ANYBODY ELSE?

OK.

WE HAVE ONE MORE QUESTION FROM
THE AUDIENCE AND I'M GOING TO
HAVE A SLIGHT VARIATION.

THE QUESTION WAS: WHAT'S THE
TOP SECURITY CONCERN THAT YOU
THINK DOCTORS SHOULD BE AWARE OF
AS THEY RELY ON THESE DEVICES?

I WILL EXPAND THAT TO BE BEYOND
DEVICES AND THAT YOU THINK
CONSUMERS SHOULD BE AWARE OF AS
THEY DECIDE WHETHER OR NOT TO

USE DEVICES?

AND TO THE EXTENT YOU CAN SPEAK TO ANY PRECAUTIONS THAT THE CONSUMERS OR DOCTORS CAN TAKE.

>> SO MOST OF THESE THINGS DON'T ENCRYPT ON THE DEVICE AND WHEN YOU'RE SENDING.

YOU DON'T HAVE NO KNOW WHAT THAT MEANS BUT BUYING A SIMPLE VPN, SOMETHING THAT, IF YOU'RE AT AN OPEN WiFi AT A COFFEE SHOP OR SOMETHING, YOU CAN FIRE UP AS SOON AS YOU CONNECT TO THE WiFi NETWORK, THAT WILL AT LEAST PROTECT YOUR INFORMATION FROM OTHER PEOPLE SNOOPING LOCALLY.

THAT'S SOMETHING THAT PEOPLE DON'T OFTEN OF REALIZE.

IT'S HARDER TO GIVE A PRESCRIPTION OF THINGS.

UNFORTUNATELY ONE OF THE MOST -- THE HARDEST THINGS ABOUT SECURITY THESE DAYS ARE PEOPLE'S DEVICES ARE RID HE WOULD WITH CRAP, ESPECIALLY DESKTOPS.

SOMEWHAT TO A LESSER DEFENSE YOUR GATED MOBILE PLATFORMS BUT EVEN THEN, THERE'S VARIOUS THINGS THAT CAN DO PRETTY PROMISCUOUS ACCUSE STUFF.

THEY CAN DO THINGS WITHOUT YOUR KNOWING THAT IF YOU APPRECIATED THE CONSEQUENCES, YOU WOULDN'T LET THEM DO.

AND MAYBE YOU KNOW THIS MUCH IS WHY THE PRIVACY RIGHTS CLEARING HOUSE STUDY I DID WAS SO NEAT.

IT WOULD BE NEAT IF YOU COULD PUT BOUNTIES UP AND SAY WHAT IS THIS APP I CARE A LOT ABOUT LIKE MY PASSWORD MANAGEMENT APP.

I HAVE A REALLY BOUTIQUE ONE THAT I DON'T KNOW IS VERY SOUND AND I WOULD LIKE TO KNOW THAT AND I CAN'T PAY SOMEONE TO DO

THAT AND MAYBE I COULDING A GREG
DATE MY MONEY TO DO THAT AND
THAT WOULD HAPPEN QUICKLY FOR
THE TOP APPS.

>> FOR ME, I THINK IT'S A --
CONSUMERS NEED TO UNDERSTAND
THAT THE THING THAT THEY'RE
USING IS PROBABLY NOT SECURE.
I THINK THAT A LOT OF USERS AS A
RESULT OF JUST HAVE THE
ASSUMPTION THAT IT IS AND
THEY'RE LIKE I LOOK IT UP ON THE
INTERNET AND IT'S GOING TO BE
FINE.

WHY WOULD A HACKER ATTACK ME?
IT'S A 35-YEAR-OLD WHITE MALE AT
STARBUCKS.

I DON'T HAVE ANY MONEY, I DON'T
HAVE ANY POWER, WHATEVER.
THAT'S JUST SIMPLY NOT TRUE.
THEY USE -- YOU KNOW, ATTACKS
USE THOSE TYPES OF PEOPLE AS A
STEPPINGSTONE, OR USE LARGE
QUANTITIES OF THOSE TYPES OF
PEOPLE, WHERE THEY'RE NOT
TALKING YOU BUT IT'S LEVERAGE
AGAINST SOMETHING ELSE.
IT'S A WAY TO HIDE.

SO YOU KNOW, GETTING CONSUMERS
TO STOP AND THINK FOR A MOMENT,
I'M AT A STARBUCKS, SHOULD I LOG
INTO MY BANK THAT IS TOTALLY NOT
ENCRYPTED RIGHT NOW?

MAYBE NOT.

>> RIGHT?

SO IN SOME CASES WE'RE GETTING
THERE WITH THE FINANCIAL
INDUSTRY.

YOU KNOW I GO TO THE ATM MACHINE
AND NOW THERE'S A LITTLE HOVEL
YOU HAVE TO GET INTO AND THINGS
THAT PROTECT YOUR FINGERS AND
PEOPLE ARE SWAMP THAT NOW AND I
THINK WE NEED TO TAKE THAT
BARRENS TO THE NEXT STEP WHICH
IS I'M WEARING THIS DEVICE

COLLECTING ALL OF THIS DATA
WHERE IS MY HOVELL OR KEYPAD,
AND I HAVE TO PICK A PASSWORD
MORE THAN THREE CHARACTERS,
THINGS THAT WILL HELP DO THAT.
AND SOME OF THE CONSUMER DEVICE
MANUFACTURERS ARE STARTING TO DO
SOME OF THAT.

BUT DOCTORS NEED TO MAKE THEIR
PATIENTS AWARE OR THE COMPANIES
NEED MAKE THEIR PATIENTS AWARE
THAT, YOUR MEAV GETTING
SOMETHING THAT IS CONNECTED
HERE.

LET'S THINK ABOUT THAT.
LET'S THINK ABOUT THAT IN A
LARGER CONSTRUCT.

AND THAT'S HARD TO DO.

>> BUILDING OFF OF WHAT JAY HAS
SAID, I THINK THAT DATA
INTEGRITY IS REALLY THE -- AND
HEALTH CARE THAT'S WHAT WE WORRY
MORE ABOUT PROBABLY MORE THAN
ANYTHING ELSE IS DATA INTEGRITY,
IS A DOCTOR GOING TO ACT TON
DATA THAT MAY NOT BE ACCURATE,
THAT MAY NOT REFLECT THE
INFORMATION COLLECTED?

TAKING A CUE FROM DATA
ANALYTICS, THE ANSWER ISN'T LESS
DATA BUT MORE.

I THINK WE WILL HAVE MULTIPLE
SENSOR AND DIFFERENT
APPLICATIONS MEASURING BLOOD
PRESSURE AND I THINK THAT THEY
WILL BE AGGREGATED AND SIFTED
AND THE COMPOUNDED VARIABLES AND
IT WILL COME OUT WITH CLEAN DATA
AND THAT WILL HAVE DATA
INTEGRITY.

I THINK THAT WE'RE GOING TO
EVOLVE INTO A PLACE WHERE WE
WILL BE ABLE TO DETECT WHEN THE
DATA DOESN'T HAVE THE INTEGRITY
THAT WE'RE USED TO SAYING AND WE
WILL BE ABLE TO HOPEFULLY TREAT

ALONG THOSE LINES.

>> EVERYTHING THAT YOU SAID, I AGREE AND ONE INTERESTING OBSERVATION WHERE I GO BACK TO MY EARLIER POINT ABOUT THE CLASH.

IN ONE OF OUR LARGER CLINICAL STUDIES, WE OBSERVE MANY THINGS. UNIVERSITY OF THE MARYLAND WAS OUR PROINL INVESTIGATOR AND IT WAS AN ACADEMIC STUDY AND WE HAD THE LUXURY TO OBSERVE AWL KINDS OF STUFF JUST TO OBSERVE, RIGHT, BECAUSE IT WAS ACADEMIC AND THEN TO FIGURE OUT IF THERE'SNY VALUE IN IT.

AND IT WAS INTERESTING TO SEE, YOU SAW HOW I PASSWORD PROTECTED MY POLITICS, I HAD TO ENTER A FOUR DIGIT PASSWORD TO GET INTO THE POLITICS?

WE MADE THAT OPTIONAL.

WOULD WE KNOW FROM TDA, THERE'S A PH RMPLET ON THE PHONE THAT HAS THEIR MEDS AND DOSES AND ALL OF THAT AND THAT IS PASSWORD PROTECTED, THERE'S A SECOND LAYER.

BUT THE ONE FOR THE POLITICS, THERE'S NO REAL DATA OR PHI STUFF.

WE SAID LET'S MAKE IT OPTION MANY.

WHAT WAS INTERESTING IS THAT DOCTORS CAME TO US AND TOLD US, I THINK YOU SHOULD TAKE THAT AWAY.

WE SAID WHY?

SAID, BECAUSE PEOPLE WHO ACTUALLY DO THAT AREN'T USING THE SYSTEM.

IT'S ONE MORE HURDLE FOR THEM TO GO INTO -- USABILITY.

SO THEIR INCOME IS THE CLASH.

INTERESTING.

THEYCY TAKE AWAY THE ONE THING

AND WE SAID, HMM, INTERESTING.
AT THE END OF THE DAY DOCTORS
ARE PRESCRIBING LIPITOR, AND BAD
EXAMPLE WITH THE STATINS AND
WHAT HAS BEEN HAPPENING THE
THAT'S COUPLE OF DAYS, BUT
DOCTORS FROM PRESCRIBING LIB TO
HAVE TO HELP PATIENTS MANAGE
DIABETES.

THEY HAVE WANT THEIR PATIENTS TO
BE BETTER.

SO ANY HURDLE THAT YOU CAN
REMOVE, THAT'S WHERE WE WILL GET
THE CLASH AND NOW IF WE HAVE --
TO THE EARLIER POINT OF I HAVE
TO CONSENT EVERYTHING AND
PRIVACY AND PATIENTS WILL THROW
THE THING AWAY.

THEY WON'T USE IT.

THAT'S WHERE WE ARE GOING TO
HAVE -- IT WILL BE INTERESTING
HOW IT PLAYS OUT.

>> THANKS.

WEAVER JUST ABOUT OUT OF TIME
PUT I WANTED TO GIVE EVE
PANELIST 30-SECONDS OR LESS.
WHAT TO YOU SEE AS THE MOST
VALUABLE ROLE FTC COULD PLAY IN
THIS SPACE?

SCOTT NO.

>> TWO THINGS: ONE, APPLY THE
EXISTING LAWS AND THINGS LIKE
FICRA SO LIKE THIS YEAR IN
JANUARY THE FTC LOOKED AT AN APP
THAT MADE IT AVAILABLE TO
EMPLOYERS AND YOU WILL SEE OTHER
TYPES OF DATA AND TRYING TO
MIGRATE OUT OF THE SPACE INTO
THINGS LIKE EMPLOYMENT AND THEN
YOU HAVE TO WATCH THAT LINE AND
THEN THE SECOND THING IS I WOULD
LOOK HARD AT THE PRIVACY
POLICIES OF THESE CONSUMER
PRODUCTS ALREADY AND ASK WHETHER
THEY ARE ENOUGH OR ARE ACCURATE
OR POTENTIALLY YOU COULD SAY

HERE ARE THE THINGS THAT WE
THINK THESE CONSUMER DEVICES
SHOULD AT LEAST TALK ABOUT IN A
PRIVACY POLICY.

>> THANKS.

STAN?

>> STAN: YOU USE YOUR STATION
AS YOU HAVE HEAR TO CONVENE
STAKEHOLDERS AND HAVE MEANINGFUL
CONVERSATIONS LIKE THIS.

BUT I THINK ALSO TO BEGIN THE
PATH DOWN INAPPROPRIATE USE
CONVERSATION, JUST RECOGNIZING
THAT, YOU KNOW, NOTICE AND
DECEPTION IS GOING TO GET YOU
VERY FAR DOWN THIS PATH.

>> JOE?

>> MAYBE SOME VERY SPECIFIC -- I
DON'T KNOW HOW SPECIFIC YOU CAN
GET -- GUIDELINES ANT BEST
PRACTICES IN TERMS OF DEVICE
PRIVACY AND SECURITY, MORE
ENFORCEMENT THAT FILLS THE GAP
THAT HIPAA HAS LEFT LIKE THE LAB
MD CASE, YOU KNOW, WHICH WOULD
HELP THE OTHER SIDE OF THAT IS
HAVING THINGS TO POINT TO DO SAY
HERE IS WHAT YOU SHOULD BE
DOING, AND HERE IS WHAT RAN
AFOUL IN THESE CASES BUT THAT
WILL COME IN TIME.

>> JAY?

>> BUOY HAVE TO HAVE SOMEBODY
THAT HOLDS COMPANIES ACCOUNTABLE
FOR THE STATEMENTS THEY MAKE.
TOO MANY COMPANIES SAY OH, YEAH
WE'RE TOTALLY SECURE AND
SOMEBODY LIKE ME COMES AND PULLS
THE MONSTER OUT OF THE BED AND
SHOWS SOMEWHAT THERE.
I CAN'T SLAY THE MONSTER.
I KEEP PULLING THEM OUT AND I
CAN'T DO ANYTHING WITH THEM SO
THERE NEEDS TO BE CONJUNCTION
THERE OVER MAKING ACCOUNTABILITY
THAT YOU CAN'T DO THAT, THAT YOU

HAVE TO BE ACCOUNTABLE FOR YOUR ACTIONS.

>> THANKS.

AND ANAND?

>> I WOULD SAY CONTINUE TO DO THIS BIT CONTINUE TO COLLABORATE WITH THE OTHER AGENCIES. AT THE END OF THE DAY IT'S NOT JUST YOU BUT THE FCC IN THE CONNECTED HEALTH SPACE. RATHER THAN RECREATING SOMETHING AND TRYING TO START SOMETHING ON YOUR OWN, KUDOS TO COMMISSIONER HAMBURGER AT THE FTA FOR THE GUIDANCE DOCUMENT AND PATEL THAT PUT IT OUT, GREAT WORK.

THERE'S HOLES IN THAT AND THERE ARE PIECES THAT YOU HAVE EXPERTISE IN THAT YOU CAN HELP PLUG SOME OF THOSE HOLES AND I THINK IT SHOWS A TREMENDOUS AMOUNT OF NATIONAL LEADERSHIP TO STITCH THESE PERSPECTIVES AND AGENCIES TOGETHER TO COME UP WITH THE REQUIREMENTS FOR WHAT AN EXCLUSION SHOULD DO AND LET INDUSTRY INNOVATE THE WAY THEY SHOULD AND COMPETE ON COMPETITION AND YOU CAN HELP ACCELERATE THE ADOPTION OF THESE BY PARTNERING WITH THOSE AGENCIES.

>> OK.

THANKS TO ALL OF YOU FOR JOINING US HERE.

>>

[APPLAUSE]