

DEPARTMENT OF CORRECTIONS

FY 2014 Budget Overview
House Finance Sub-Committee

Electronic Monitoring
Information provided by BI,
a GEO Group Company

Addendum to February 7, 2013 Meeting

How Transdermal Technology Works

- The body releases about 1% of consumed alcohol through the skin
 - Secretion by the sweat glands = liquid (sensible perspiration)
 - Diffusion through the skin = vapor (insensible perspiration)
- Transdermal Alcohol Concentration (TAC) measurement
 - TAC is correlated to BrAC, but not precisely
 - For example, when BrAC goes up, TAC will also go up but not necessarily by same amount
 - Readings are delayed due to alcohol processing time – typically between 30 minutes to 2 hours

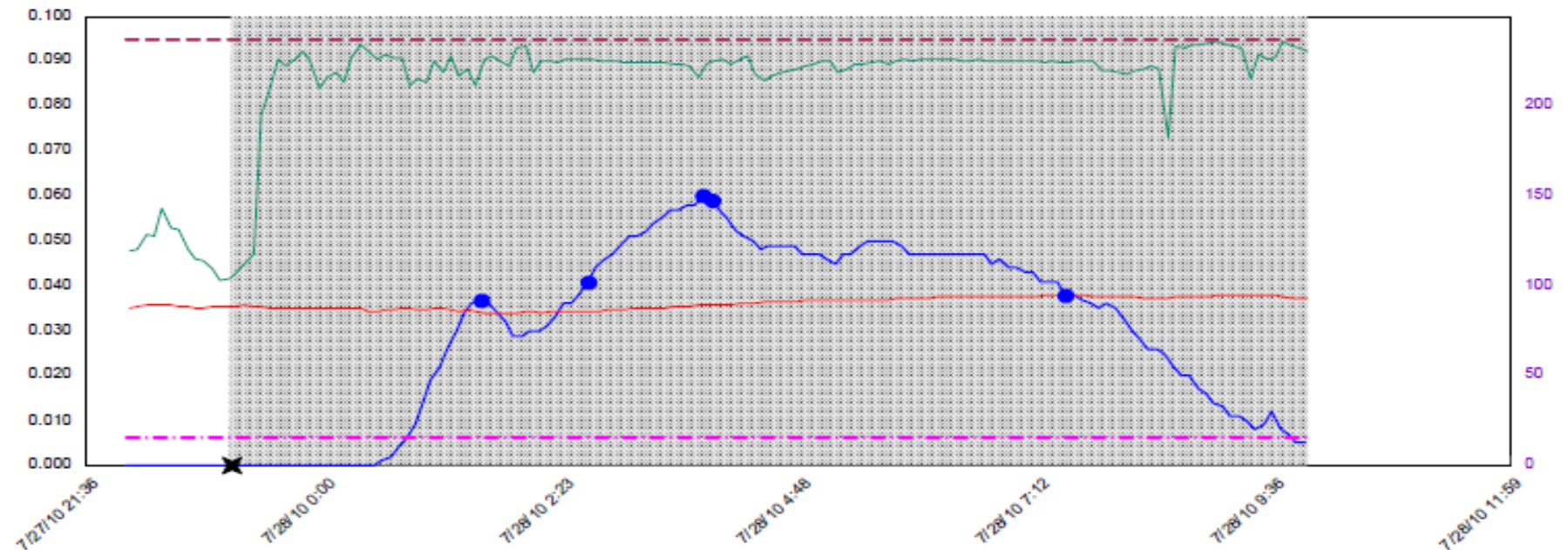
Good Drinking Event



Agency: TotalAccess Training Agency
 Officer: Keith, Jeff
 07/27/2010 22:00 - 07/28/2010 10:00

Client: Taddy, Jeff
 TAD Serial ID: 9804694
 RF Away: 11 hours, 0 mins

TAD Activity Graph



TAC	Temperature	Skin Resistance	TAD Alcohol Event	Skin Resistance High Boundary	Skin Resistance Low Boundary	RF Out of Range
DidNotEnter	TransmitterFirstFound	Enter	UnauthorizedEnter	TransmitterNotFound	Leave	UnauthorizedLeave

Listing of Related Events During the Selected Timespan

Event DateTime	Receive DateTime	Serial ID	Event Description	Comment
07/28/2010 02:40	07-28-2010 12:19	9804694	TAD Alcohol Threshold Exceeded	- Current Threshold is [0.04]

Total Access – Skin Resistance High

Alerts and Events - Windows Internet Explorer

https://exacuweb.bi.com/TotalAccess/Client/AlertEventList.aspx?startPage=ClientAlerts&MenuID=320

File Edit View Favorites Tools Help

Alerts and Events BI Incorporated Intran... BI Incorporated Intran... UltraSharp U2311H 23 i...

BI TotalAccess - Welcome GDW (TA) BI GuardCenter

Home Alerts Client Agency Reports System My Profile Messages Help Log Out

Agency: zy_TotalAccess Training Agency Agency Number: 61111111 State: IN Agency Time: 16:33
 Officer: Training Officer Officer Phone: (800) 284-1678 Mobile:
 Client: Joe TAD Client Phone: Start: 4/27/2011 End: 5/4/2011 Client Time: 16:33
 Alias: n/a Client Gender: M HomeBase RF Monitoring (cellular) TAD: 9801689 HB110: 6500111

Client Search Alerts and Events Client Profile Device Setup Rules Notification Methods Procedure Overview Client Notify Event Pairing Tools Device History Audit Trail

Drag a column header and drop it here to group by that column

Alert #	Device	Status	Alert Type	Paired With	Event Date	Rec Date
N/A	9801689	Event	TAD Strap Tamper	N/A	04/29 16:20	04/29 16:21
N/A	9801689	Event	TAD Skin Resistance Ok	N/A	04/29 14:41	04/29 16:25
N/A	6500111	Event	TAD Hello	N/A	04/29 09:54	04/29 09:54
72954421	6500111	Open	Unauthorized Enter	N/A	04/29 09:52	04/29 09:52
N/A	6500111	Event	Callback	N/A	04/29 08:49	04/29 08:49
N/A	9801689	Event	TAD Skin Resistance High	N/A	04/29 08:06	04/29 12:56
N/A	9801689	Event	TAD Recharge Solution OK	N/A	04/29 06:06	04/29 09:54
N/A	6500111	Event	Callback	N/A	04/29 03:04	04/29 03:05
72930026	6500111	Open	Unauthorized Leave	N/A	04/28 21:04	04/28 21:10
72920820	6500111	Open	Unauthorized Enter	N/A	04/28 18:04	04/28 18:05
N/A	9801689	Event	TAD Skin Resistance Ok	N/A	04/28 17:26	04/29 09:56
72917790	6500111	Open	Unauthorized Leave	N/A	04/28 17:06	04/28 17:12
N/A	6500111	Event	TAD Hello	N/A	04/28 09:58	04/28 09:59
72895990	6500111	Open	Unauthorized Enter	N/A	04/28 09:56	04/28 09:56
N/A	9801689	Event	TAD Skin Resistance High	N/A	04/28 09:36	04/28 14:05
N/A	6500111	Event	Callback	N/A	04/28 08:28	04/28 08:29
N/A	9801689	Event	TAD Recharge Solution OK	N/A	04/28 06:06	04/28 09:59
N/A	6500111	Event	Callback	N/A	04/28 02:56	04/28 02:56

Done Trusted sites 100%

Passing the 0.02 Threshold

- For these ingested substances to pass the 0.02 threshold, it would take approximately¹:
 - NyQuil (10% alcohol): 4 shots; nearly an entire 6 ounce bottle
 - Listerine (26.9% alcohol): 1.5 shots
 - Synthetic vanilla extract (35%): 1.14 shots

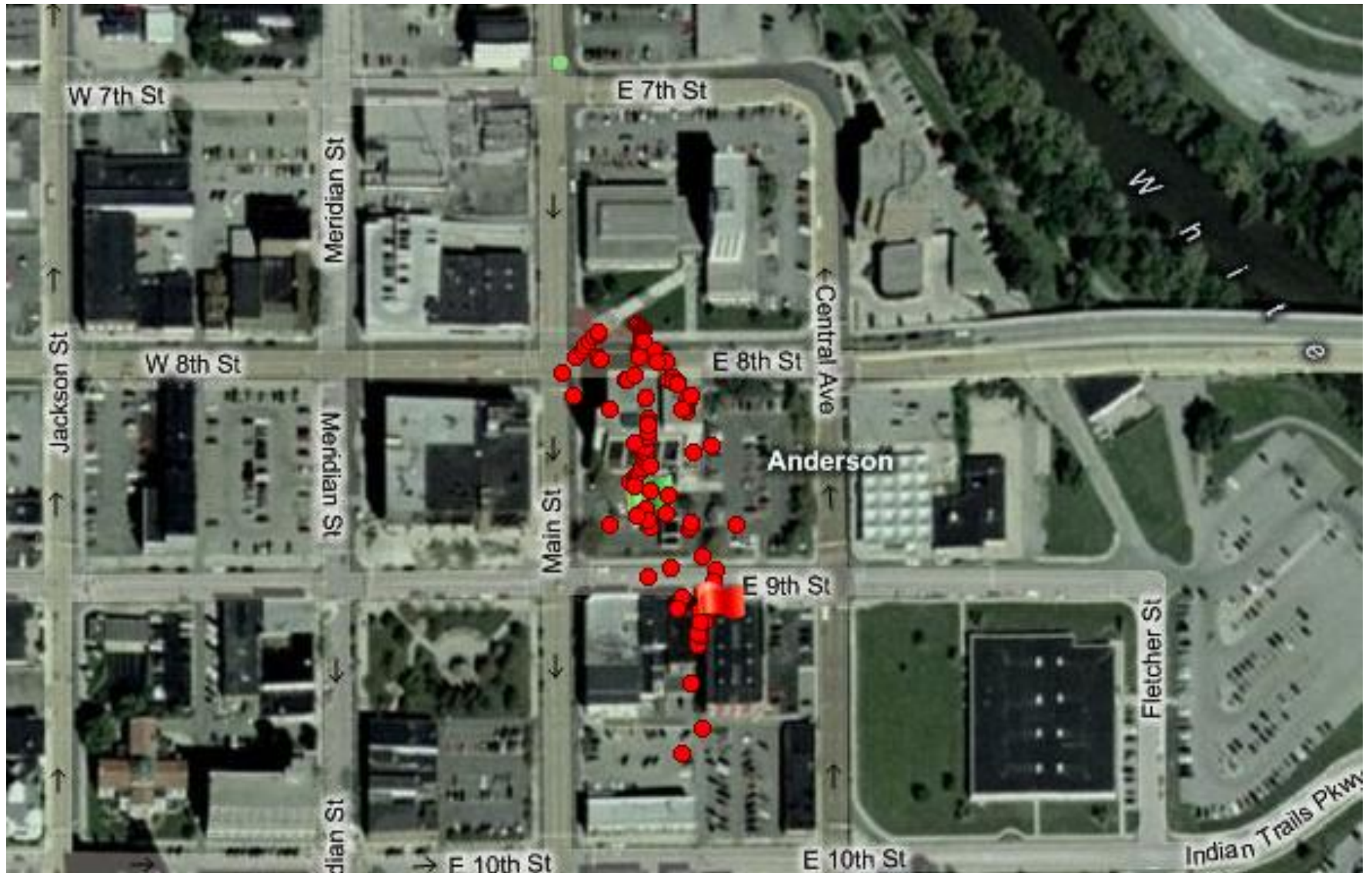


¹ Assumptions: a 180 pound man, empty stomach, drinks taken over two hour period, and a shot size of 1.25 ounces.

Location Technologies

- **Autonomous** GPS

- Location fix requires only GPS satellites
- *Advantages*
 - No cellular service required
 - Can locate anywhere outdoors
- *Disadvantages*
 - Slower initial GPS acquisition – no almanac
 - Reduced Location Accuracy due to
 - Urban canyons
 - Indoors, limited to no functionality
 - Inside cars, buses, vehicles



Seven Tamper Technologies Working Together

- Motion sensor
 - Extended periods of time may indicate device is no longer on client's ankle
- Water detection
 - Detects if the device is submerged for longer than 20 minutes
- Skin Conductivity Monitor
 - Ensures the alcohol sensor is firmly against the client's skin
- Proximity Detection
 - Ensures entire unit is close enough to client's leg
- Temperature Monitoring
 - Testing for high or low temperature readings
- Infra-Red sensor for “gunk” build up
 - Monitors for debris that may block alcohol sensor
- Fiber Optic Strap
 - Detects attempts to cut or open strap

