The Longest Running Global WebRTC Ecosystem Event
Healthcare Focus

Delivering Remote Patient Care with WebRTC

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Speakers

• Jim Donovan
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  – Oracle

• Bruce Marler
  – Director of Sales Engineering
  – CaféX Communications
Visual Information Improves Patient Care

- Video informed consent improved patient comprehension (78%) compared to verbal informed consent (65%) for knee arthroscopy\(^1\)
- Video chemotherapy education improved retention of information and management of side effects\(^2\)
- Video improved sunscreen adherence and melanoma knowledge\(^3,4\)
- Video-educated heart failure patients had better self adherence\(^5\)

Source:
1 Guttman D, et al. Arthroscopy ,June 2005
4 Loescher LJ, et al. Arch Dermatology, August 2010
WebRTC: A Wonder Drug For Patient Care?

Jim Donovan
Oracle
A Wonder Drug For Patient Care?

• Doctor:
  – I have this new “wonder drug” for you called **WebRTC**...you will love it!

• Patient:
  – But doctor, I already tried that dose of voice & video 20 years ago when **telemedicine** first came out
Hasn’t This Been Tried Before?

• Telemedicine ideas have been around since 1925

• What’s really different about WebRTC?
Patient Care collaboration needs

• Voice & two-way video are must-haves

• Chat & co-browsing desirable
  – Screen sharing must balance privacy concerns

• Cross-browser & native mobile app friendly
Is **WebRTC** ready for **Patient Care**?

- Some opinions from leading health providers:
  - **Pros:**
    - No more plug-ins
    - Simplified patient care app development
  - **Cons:**
    - Not ready for all browser & mobile app types
    - Screen sharing & data channel privacy concerns
Is Patient Care ready for WebRTC?

Vs.

Oklahoma Doctor Gets Busted for Using Skype for Telemedicine

HIPAA COMPLIANCE
HIPPA & Telehealth today

- Provider sample from [http://telehealth.org/video/](http://telehealth.org/video/)
- Most claim HIPPA compliance or have a Business Associate Agreement
- All are candidates for WebRTC
Does HIPPA really matter...

• ...or is it just an excuse by tech luddites?

• Yes, it matters but WebRTC as a technology mitigates several existing risks and does not introduce any new ones
  – Non-risk: mandatory encryption
  – Risk: using WebRTC to build solutions that expose patient information (but you could do that with existing technology!)
WebRTC: Killer App for Patient Care?

• Is Patient Care a “killer app” for WebRTC?

• Certainly plenty of telehealth $$$ out there

...but let’s be realistic about WebRTC

• WebRTC is not going to test your blood

• In-person consultations will remain in the Patient Care service mix

• WebRTC is going to make it easier to deploy Patient Care apps & solutions
Internet of Health Things & WebRTC

• Intersection Internet of Things & Health Care
• Significant investment area by health care providers
• WebRTC (data channel?) will play a role....
  – ...but the use cases are still evolving
WebRTC can help Patient Care...

• ...but is our sick patient ready to accept the technology cure?

• Regulations are evolving & telehealth market trends are promising

• WebRTC technology is better than it’s telemedicine predecessors
WebRTC & Patient Care in action

• Please visit Oracle’s tabletop (#10) & see our WebRTC-enabled Patient Care demo with SPAN Systems
Elevating Patient & Clinician Experiences

Bruce Marler
CaféX Communications
Healthcare Trends
Connect to a Doctor from your iPad / iPhone for $40.00

American Well launches in Massachusetts
$20 Co-pay Coupon Code: MA
See a Doctor Online

Connect with the first available doctor.
Click a button below to talk to a provider.

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Escalating Healthcare Costs

- Rising patient volumes with passage of Affordable Care Act (32MM newly insured)
- Aging population with high incidence of chronic disease
- Shortage of medical professionals in urban and rural communities by 2020
- Escalating costs of care delivery along with significant reductions in reimbursement
- New models of care being adopted such as ACOs, Patient Centered Medical Home

Healthcare systems faces significant challenges that will require greater collaboration and coordination among all stakeholders (administrators, clinicians, payers, and patients)
Opportunity: Patients Demand More Convenient Access

Top attributes citizens want from their healthcare provider:

- **Available:** 60% want access whenever they need it
- **Competent:** 60% want advisors with the right skills to handle their needs
- **Efficient:** 61% want streamlined interaction and communications
Video Enabled Patient Care
Merge Channel Capabilities Over Time

Digital Channels

- Put clinicians online via video
- Collaboration-enable patient mobile apps
- Educate patients via rich media, social and webinars
- Allow patients to schedule visits

“Take the Hospital to the Internet”

Physical Channels

- Access remote expertise via video
- Flexible spaces for meetings & seminars
- Access to online and digital media
- Instantly recognize patients with clinic analytics & mobile check-in

“Bring the Internet to the Hospital”
USE CASES
SNAPSHOT OF REAL-WORLD HEALTHCARE PROJECTS
Large US medical group, specializing in post-hospital discharge care, uses click-to-video & video conferencing between patient, clinicians & family members – all from browser portal with no plugins or downloads
Click to Video from Patient Portal

- HTTPS
- SIP
- JavaScript / Client SDK
- Signaling Gateway & Media Broker
- Existing UC Infrastructure
- PSTN
- Internet
Telemedicine: Remote Video Enabled Consults

**Challenge**
Large US hospital wants to expand reach to remote, under-served areas

**Solution**
Leverage WebRTC for video-enabled remote care over the internet

- Patient logs on to hospital’s portal (web-browser or tablet)
- Greeted by video concierge (waiting room)
- Clinician consult (uses existing video device, tablet or browser)
- Clinician conferences in other specialist to 3-way conference

- Secure authentication
  - No headache of downloads or setup for patients
- Reuse existing video devices
  - Share X-rays, medical records securely
Personalized, Contextual Engagement

**Clinician View**
- In-App HD Audio/Video
- Mobile & Web
- Co-Browse
- Remotely Control App
- Push Docs & Links
- Photo Share
- Draw On Screen
- Highlight & Annotate
- Capture Context Across Web, Chat, Video

**Patient View**
Overlay Existing Infrastructure

Client-Side SDKs for JavaScript, iOS, Android

App Server

HTTP to SIP Gateway

Media Broker

VXML Gateway

IVR

SBC

UC / PBX

CC

Tele Presence Manager

Tele Presence MCU

IP Phones

Clinician Portal

Video Endpoints

Immersive Endpoint

Overlay Existing Infrastructure

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Thank You

Please remember to complete an evaluation of today’s sessions
Questions (hidden)

1. How much custom professional services is required on the back-end to extend existing collaboration infrastructure out to public-facing mobile & web apps?
2. What is the impact to mobile apps & websites by adding in-app video and live assistance features? Lots of redevelopment & depend
3. For the live assistance features (co-browse, annotation, etc.), would these be enabled by the WebRTC data channel or some other mechanism?
4. How is compliance ensured (e.g. HIPAA) when enabling remote video & live assistance between patients and clinicians?
5. What can technology vendors do to better accelerate WebRTC in Patient Care solutions?
6. Why will WebRTC succeed where earlier telemedicine technology initiatives have struggled?
7. What sort of interesting Patient Care use cases can be address via the WebRTC Data Channel?