INVENTION DISCLOSURE

1. **Invention Title.**

System for obtaining and sharing records (e.g. medical)

2. **Invention Summary.**
This invention describes a system for obtaining and sharing records (e.g. medical).

3. **Invention Description**.

a. Describe the invention in detail.

Background and Problem Statement:

How do you obtain and share your medical records today? The following steps may seem familiar:

1. Doctor recommends a lab test and gives you a paper prescription with the test details. Doctor's assistant may also send the test details straight to the lab. Patient schedules an appointment with the lab. Doctor's assistant may also schedule an appointment for you.
2. You go to the lab and get the test done. In most cases it takes a couple of days before the results of the report are ready and can be shared with you or the doctor. Most labs offer a service where they can send the report directly to your doctor.
3. After waiting a few days for the report to be ready, you go see your doctor and if you are lucky the doctor has received the report from the lab. At this point doctor does his job. Most labs also give you the option of obtaining details of your test (e.g. X-RAY, MRI) on a DVD, which in most cases you have to go to the lab to obtain it.
4. Now imagine you want a second opinion from another doctor. Even better, you are travelling out of town and for whatever reason you need to have access to the same report in order to see a doctor. What do you do? Call the lab? Or ask your friends and family to search the DVD and FedEx it? What if you were traveling to a different country and you need access to the report? What if you are visiting a cousin or friend who is an expert in the area but can only provide advise if you can show him the report.
5. Now imagine that you are asking your dentist to send the X-RAY and other details to a new dentist in the same or different city. Dentists don't like to lose patients and would make every effort to not send X-RAYS. Additionally, dentist make good money from X-RAYs and will make every excuse for not been able to obtain them from your previous dentist in time.

Disclosure:

In this disclosure, we provide a convenient way for patients to obtain medical records from the lab and then share them with any doctor of their choice at any place, anytime and instantly (as far as the doctor has access to internet).

1. ***Obtaining the records:***

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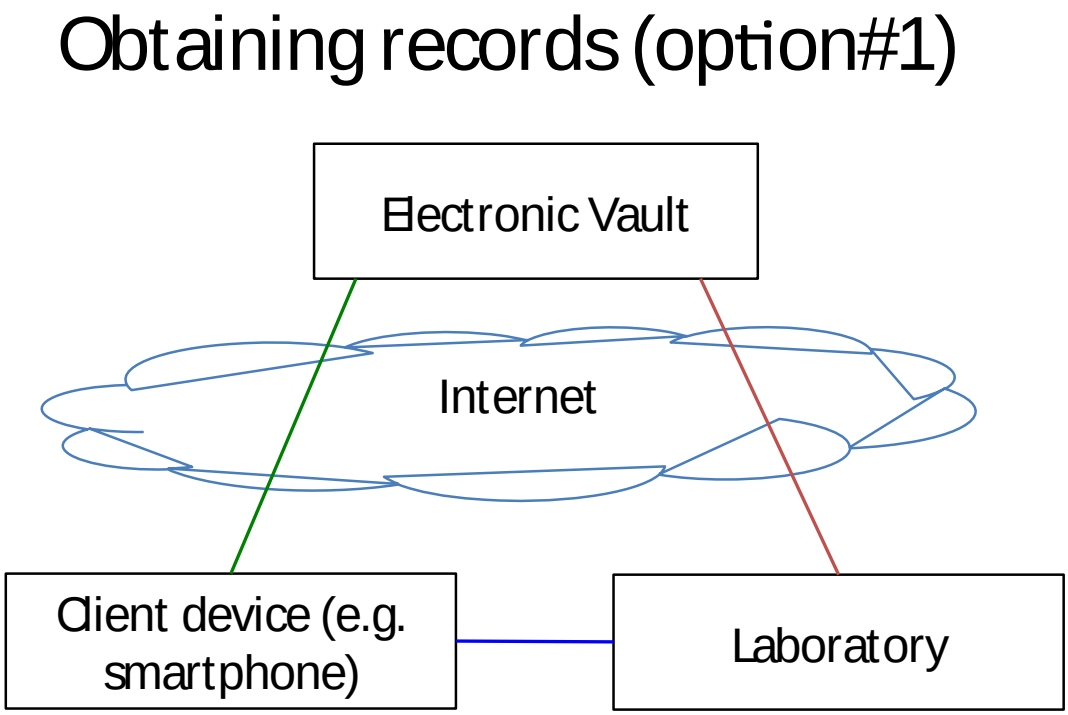

Details of Option#1 for obtaining records:

Patients has secured storage space (electronic vault) in the cloud

- The electronic vault service comes with an application for the smart phones

Patient goes to the laboratory to obtain the records.

- Patient walks to the assistant or kiosk and authenticates herself using one of the following methods: Government provided ID/ Retina scan/Finger prints etc.

Upon successful authentication, patient requests the vault app on her smartphone to generate a key and URL.

- App communicates with the vault in the cloud to obtain URL and the key (or the key could be locally generated and sent to the cloud to help create a unique URL).
- Both the URL and Key are only good for one transaction and short-lived.

After successfully obtaining the key and URL, patient shares this information with the assistant's computer (e.g. PC / kiosk machine) using one of the following methods:

- Near field wireless communication/ Bluetooth / Wi-Fi direct / 60 GHz Wi-Fi
- Or the smart phone app generates a QR code which assistant can scan

The lab computer uses this patient provided information to upload records to the cloud.

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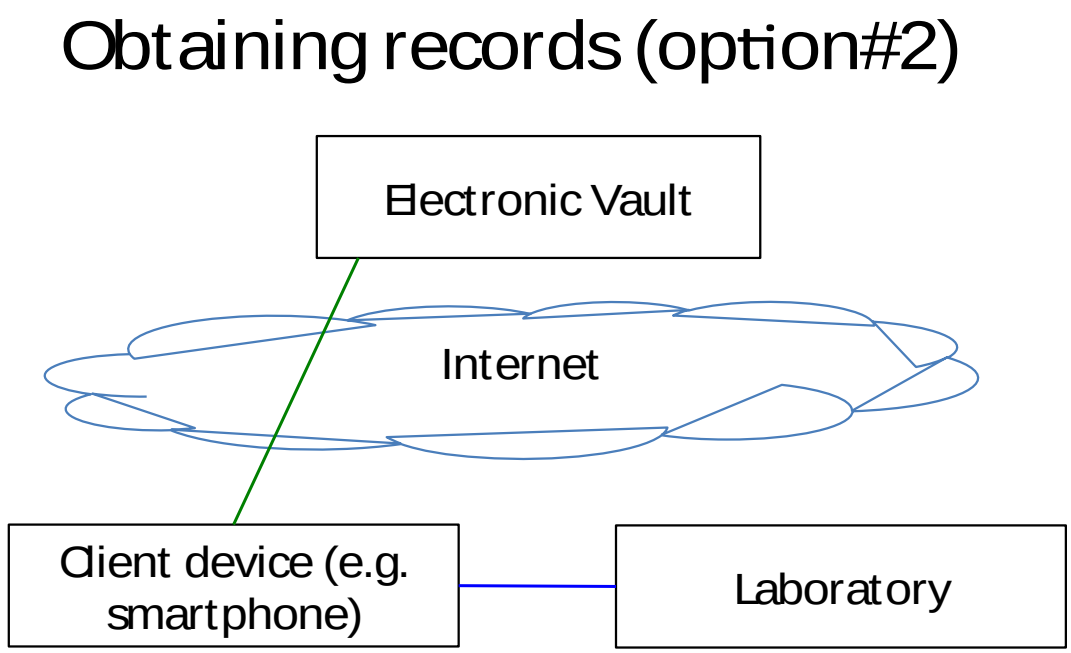
- The previously generated Key is used to encrypt the communication and URL is used to identify the location of the vault server. Machines in the lab simply use the Internet connection for this transaction.

Once the records are successfully uploaded, patient gets a success notification on his smart phone. The lab will also receive a success notification.

- Notification sent by the vault server to the patient smartphone should also indicate that the URL and key provided for the operation are no longer valid and the patient should request another key and URL if she needs to upload another record.

The whole transaction above can also be made secure using PKI certificates

- If the Cloud and the user's app use certificates to Authenticate each other, that communication link can be secured,
- If the Lab and the user use certificates which they can Authenticate that communication link can be secured as well.



Details of Option#2 for obtaining records:

Patients has secured storage space (electronic vault) in the cloud

- The electronic vault service comes with an application for the smart phones

Laboratory uses one of the following methods to transfer the medical records to patients smart phone

- Near field wireless communications/ Bluetooth/ Wi-Fi direct/ 60 GHz Wi-Fi

Patient then uploads the file to the vault server in the cloud and removes the file from the smartphone

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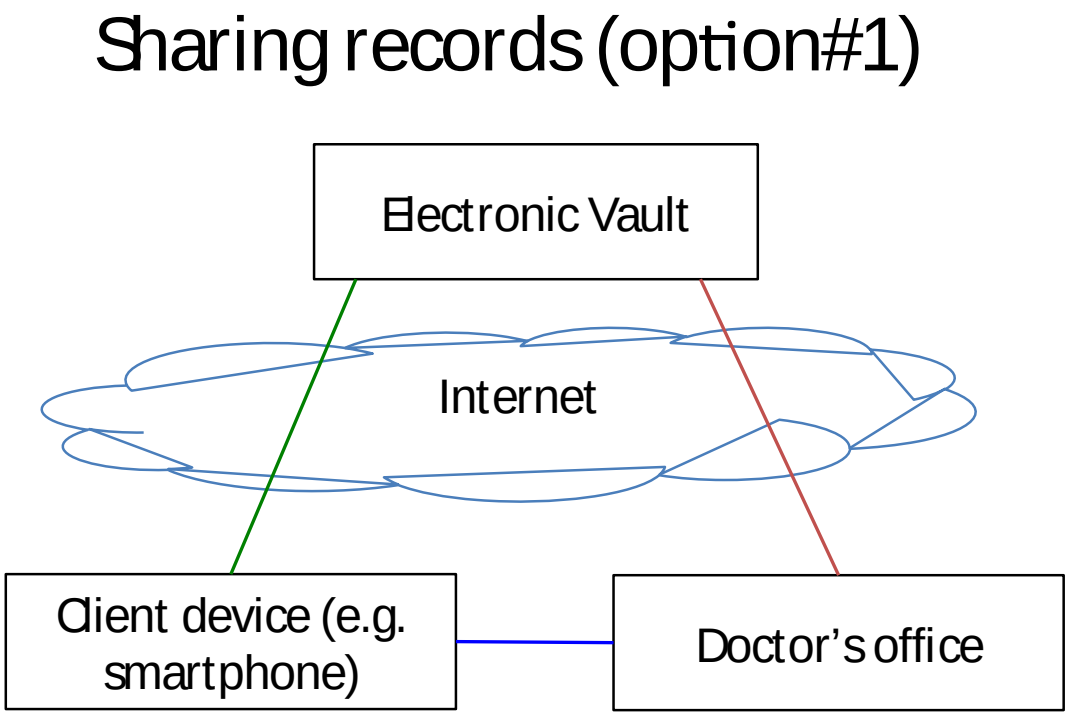
Again PKI certificates can ensure security on each link here.

2. ***Sharing the records:***



Details of Option#1 for sharing records:

Patient would like to share the records with the doctor at the time of the visit.

- Patient walks to the assistant or kiosk and authenticate her self using one of the following method: Government provided ID/ Retina scan/ Finger prints etc

Upon successful authentication, the patient requests the vault app on her smartphone to generate a key and URL.

- App communicates with the vault in the cloud to obtain URL and the key (or the key could be locally generated and sent to the cloud to help create a unique URL).
- Both the URL and key are only good for one transaction and short-lived.

After successfully obtaining the key and URL, patient shares this information with the assistant's computer (e.g. PC/ kiosk machine) using one of the following methods:

- Near field wireless communication/ Bluetooth/Wi-Fi direct/60GHz Wi-Fi
- Or the smart phone app generates a QR code which assistant can then scan

The lab computer uses this patient provided information to **obtain** the records from the vault.

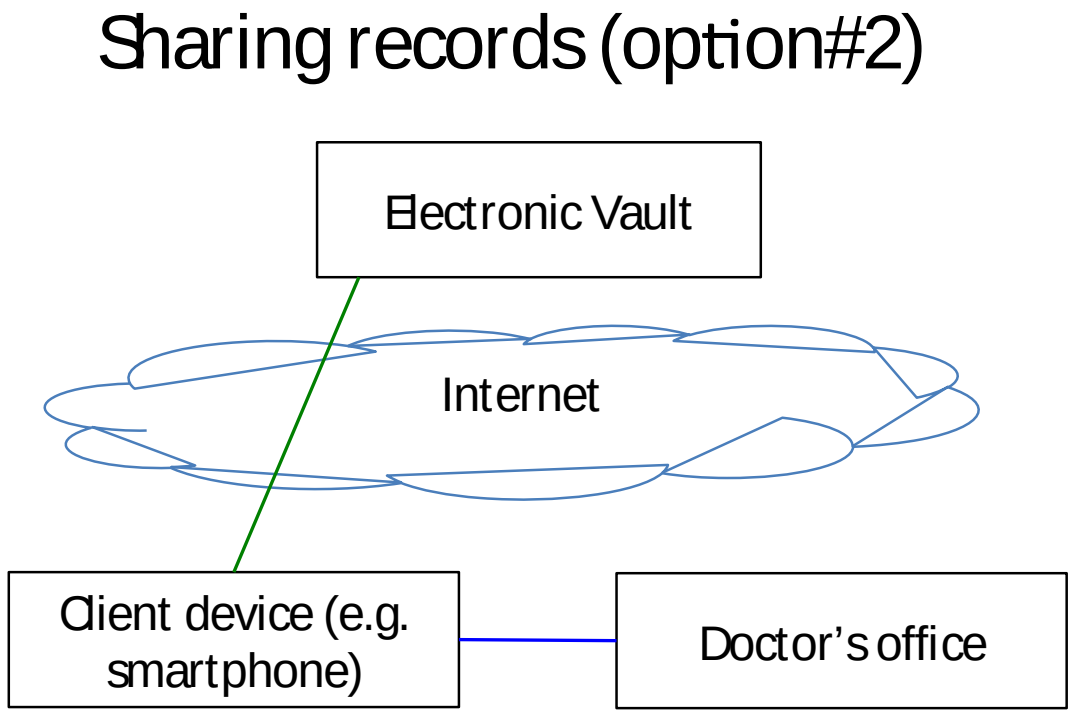
- The previously generated Key is used to encrypt the communication and URL is used to identify the location of the file on the vault server. Machines in the lab simply use the Internet connection for this transaction.

Once the records are successfully obtained, patient gets a success notification on his smart phone. The doctor's office will also receive a success notification.

- Notification sent by the vault server to the patient smartphone should also indicate that the URL and key provided for the operation are no longer valid and the patient should request another key and URL if she needs to upload another record.

The whole transaction above can also be made secure using PKI certificates

- If the Cloud and the user's app use certificates to Authenticate each other, that communication link can be secured,
- If the Lab and the user use certificates which they can Authenticate that communication link can be secured as well.
- Certificates also could be exchange to generate a shared secret for each transaction



Details of Option#2 for sharing records:

Patients downloads the file from the vault on her client device

Patient uses one of the following methods to stream medical records to the doctor's machine

- Near field wireless communications/Bluetooth/Wi-Fi direct/ 60 GHz Wi-Fi

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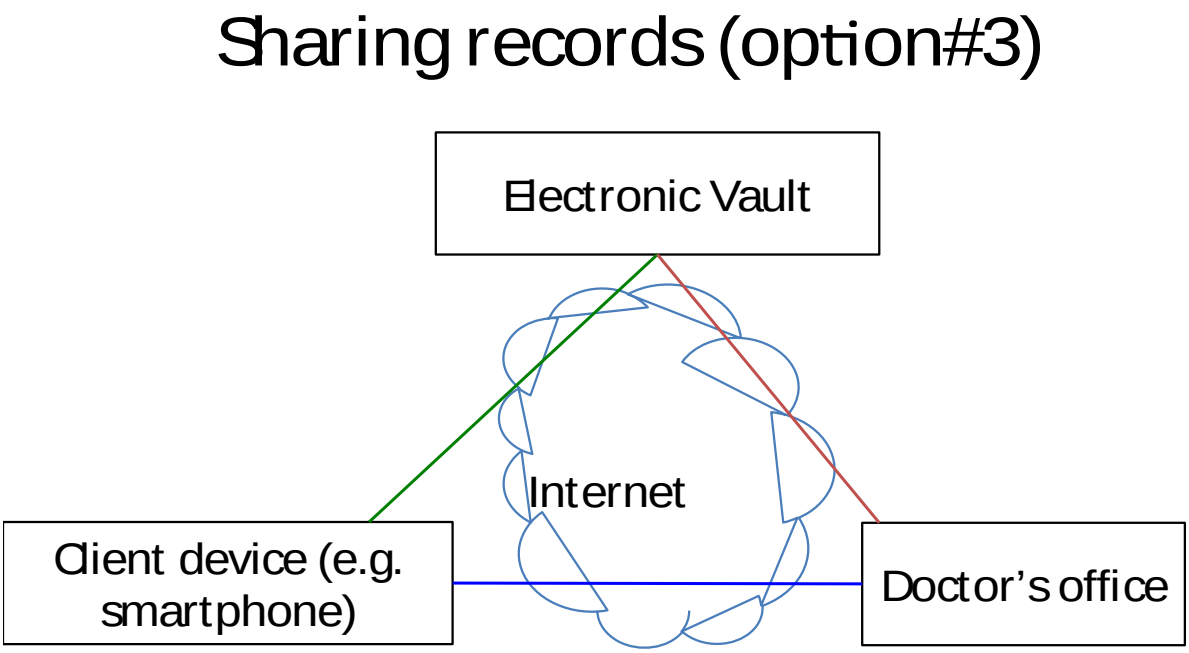

Details of Option#3 for sharing records:

- *Patient call the doctor's office remotely (e.g. to schedule to an appointment)*
- *Doctor's assistant takes the patients details and asks the patient to provide a URL for the medical record to the IVR upon her transferring the call*
- *Once the assistant is done, she transfers the patient to IVR and IVR asks the patient for URL and key to the medical record. IVR asks the patient to convey this using voice modulated tone*
- *Patient instructs the evault application to obtain a URL and key from the vault server and send them to the IVR over the current telephone call*

b. Why was the invention developed? What problem(s) does the invention solve? How is it better?

The problem is described at the beginning of the document. All of us have faced this problem and digitization and efficient use of medical record is an active area of research. These methods not only simplify the document obtaining and sharing process but also hold the potential of lowering the cost of medical care in the long run.

c. Briefly outline the potential commercial value and customers of the invention.

Current method of obtaining and sharing medical records are very archaic. This disclosure is very broad and provides a number efficient ways for obtaining and sharing medical records. If nothing, we should be able to license it.

4. **HOW is this invention different from existing products, processes, systems?**

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This is a novel idea. I don’t think folks have looked into this specific problem yet.