

# *BVCC Program*

August 12, 2019



**“Viber Communications App”**

Joel Ewing, BVCC

# What is Viber?

- **One of several communications apps**
- **Main competitors: Skype & WhatsApp**
  - **All have encrypted communications but different business models**
  - **All support messaging, phone, & video phone over Internet**
  - **All support multiple platforms**
  - **View of which is "best" varies**  
**Skype generally reviewed to have better quality sound and video than Viber, but at the cost of using more bandwidth for communication**

# Viber Requirements

- **Smart phone with cellular service as primary device – Viber ID is cell phone number**
- **Secondary devices must have built-in or add-on microphone & speakers for voice calls and also a web cam to send video for video calls (you can still receive a video call on a computer that lacks a webcam)**

# Viber Features

- **Free & secure calls and messages to all Viber users**
  - also can call non-Viber users at 1.9¢ per minute, but final leg over phone system not encrypted (called Viber Out)
  - Freeware for Android, IOS & MacOS, MS Windows, and Linux
  - International calls without international cell service
  - Live calls can be switched to video. Messages can be text audio, video, or include music and pictures
  - Calls work over WiFi Internet in locations without cell coverage
- **Goals: free software, no ads(?), free Viber-to-Viber service.**
  - Viber makes money on "stickers", downloadable games, calls to non-Viber users, and requiring prepay deposits for chargeable services

# Viber Features

- **Primary device on Viber account must be device with cellular service – phone number is Viber "ID"**
  - **Can have additional secondary devices associated with that primary device (adding secondary device to account requires that the primary device has cellular reception and its camera has access to the secondary device screen)**
  - **Contacts list on primary device is used as Viber directory and is accessible to your Viber apps on associated secondary devices – can tell which of your contacts have Viber**

# Viber vs WhatsApp & Skype

- **WhatsApp more popular for messaging, Skype also has more users – not an issue if family & friends you want to contact have Viber**
- **Viber started as mobile app, then added computers; Skype started on computers, then added mobile devices. May explain differences in design. Skype has been around longer (more features)**
- **WhatsApp started out as subscription service – has recently changed to be more like Viber, possibly because of Viber competition**

# Viber vs WhatsApp & Skype

- **When used on a computer both Viber & Skype use various TCP/IP ports to establish connection**
  - **Implies some ports must be opened to the Internet for inbound traffic to establish direct paths between calling and called devices, but...**
  - **Viber on computer on LAN behind a router worked without having to explicitly open any router ports: Unless router explicitly configured to disallow, it appears that Viber uses a "trick" where calling and called devices co-ordinate through a server on the Internet to establish required paths between the devices (called "UDP hole punching")**

# Viber Installation

- **A smart phone or pad that owns a phone number must be the primary device for that phone number**
- **Find "Viber Messenger" app and install**
  - **Viber is free on all supported platforms**

# Setup iPhone Viber Messenger

- **Option: Allow Viber to access your location while you are using the app**
- **"Continue" to agree to terms & policies**
- **Option: Transfer Viber history from another device**
- **Enter your phone number (capable of receiving SMS messages).**
- **"Is this your phone number? yes|Edit"**
- **When receive 6-digit code in SMS message, enter code number to confirm.**

# Setup iPhone Viber Messenger

- **Option: Allow Viber to Access your contacts list?**
  - For chat/messages will only show other Viber users
  - For phone contacts, will allow you to see and "invite" non-Viber users to install Viber and see which of your contacts are already on Viber and can receive a Viber call for free
  - If "no" should be able to manually add contacts (not tried)
- **Allow Viber to Send you Notifications**
- **Allow Viber to access the microphone**
- **Viber setup requires "your name" and "birth date (to determine age), or option of using Facebook details. Thought both these levels of personal detail over-kill for stated use, so used fake birth date giving same age**
- **Viber app should be functional**

# Setup Android Viber Messenger

- **The permissions and info requested are:**
  - **Phone number and verification**
  - **Allow Viber to access your contacts**
  - **Allow Viber to make and manage phone calls**
  - **Name & Date of Birth**
  - **Allow Viber to access photos, media, and files**
  - **Allow Viber to take pictures and record video**
  - **Allow Viber to access this devices location**

# Viber Alternate Device Installation

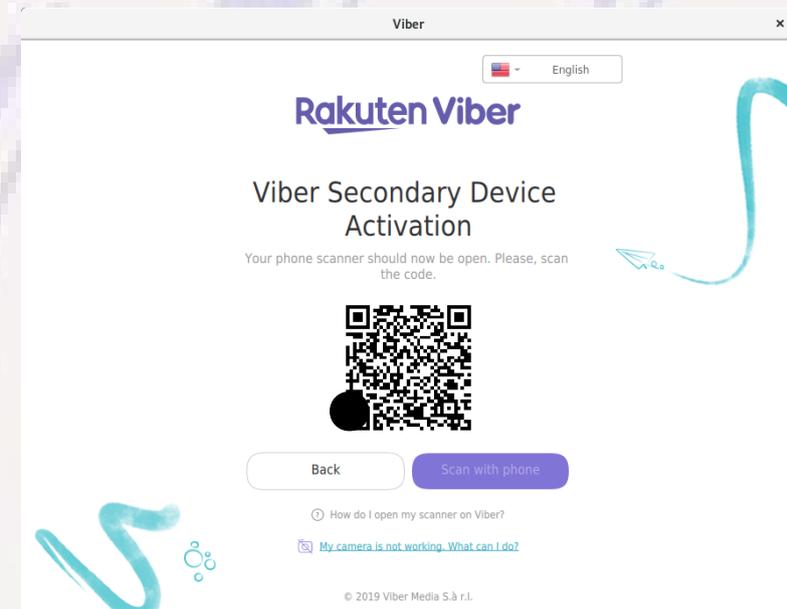
- **The same Viber account can be associated with other devices or computers**
  - **Viber on any of the devices can be used to issue or respond to a Viber message or phone call to the primary device phone number – don't believe in-progress Viber call can be switched to another device**
- **Setting up a new alternate device requires both the primary and alternate Viber devices be at the same location and functional cellular service to the primary device at that location.**

# Installation on Linux

- **Debian or Fedora-based Linux distributions supported. Download either the .DEB or .RPM version from [www.viber.com](http://www.viber.com)**
- **Initial execution after install will set up**
- **Indicate "Yes" to installed on mobile device (recommend doing that first)**
- **Enter phone number of primary device**

# Installation on Linux

- Next it should display a QR code. Your iPhone should prompt you to scan that QR code to associate you Linux Viber app with your primary device



- After that you will have option to sync chat history (then must approve that from your primary device). Also syncs contacts. Get "new login detected" notification on primary device. On primary device More → Settings → Account → Desktop and Tablets will show all alternate devices defined for the account

# Installation on Linux

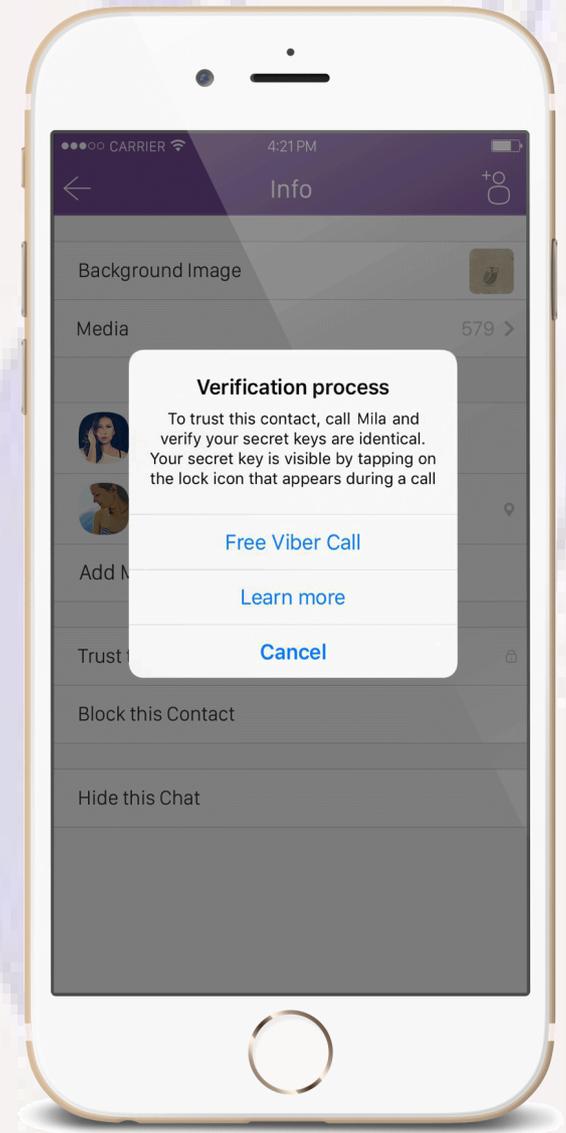
- **One of the options under Tools → Options → Account is "Start Viber on system startup". If you expect to use Viber regularly from your computer, this probably should be checked so you will be notified of incoming calls and messages. I chose to not do that, so to receive incoming Viber communications I have to start Viber.**
- **Once Viber has been started it will remain active in the background even if the window is closed and remain able to receive calls and messages until you log off**
- **I have problems getting Viber under Fedora Linux to recognize my laptop webcam. Still researching – works with at least one other app but not Viber.**

# Closing Man-in-Middle Privacy Exposure

- **If you access the Internet through an un-trusted service (public WiFi, etc.) there is a potential privacy exposure even though all transmitted data is encrypted**
  - **your device thinks it is communicating directly with the intended recipient, but there is a third party "in the middle" that is able to see messages in un-encrypted form**
  - **Solution: set up "Trusted Contacts" – a procedure where both parties go through a procedure to exchange identifying tokens that for future exchanges can confirm you are sending encrypted data directly to the intended party and not to some device posing as the target that is viewing and relaying the data**
  - **A generic problem that applies to both Viber and WhatsApp – need to use application-specific procedure to prevent**

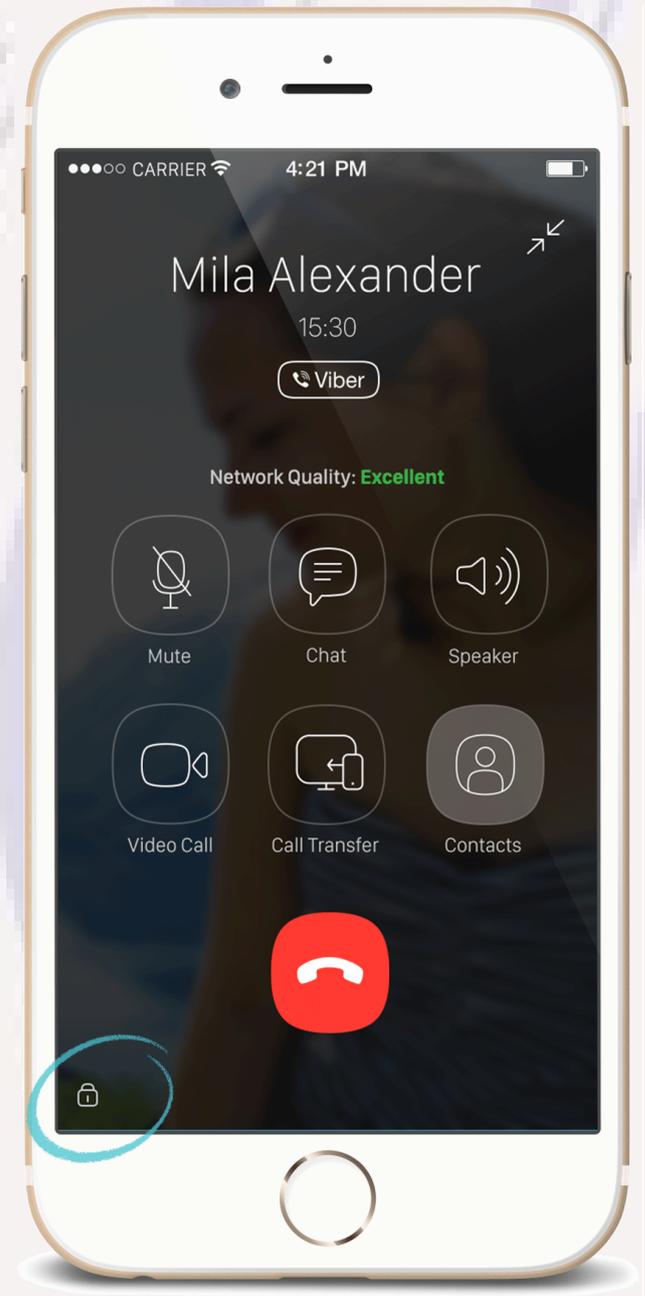
# Trusting a Contact with Viber

- **Open the chat info screen of a contact you want to authenticate (left-swipe on iPhone chat screen)**
- **Select "Trust this contact"**
- **Choose "Free Viber Call"**



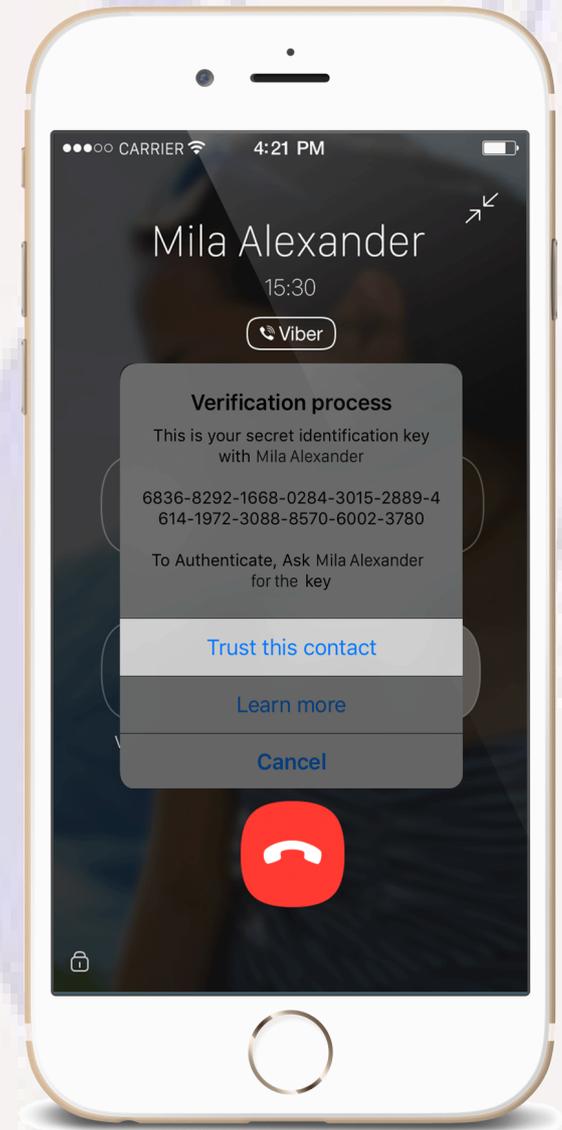
# Trusting a Contact with Viber

- **During the Viber call you both must click on the lock icon on your screen**



# Trusting a Contact with Viber

- **Read the code the appears to each other and confirm the codes match**
- **Click on "Trust this contact"**
- **The lock icon in your call will turn green to confirm successful authentication**



Demo

BVSG