

EKA Foundation meeting minutes

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To see what issues are assigned to you, log into github.com & visit <https://github.com/issues/assigned>

8. Monday 8:30PM IST (UTC+0530), Apr 29, 2019

7. Monday 8:30PM IST (UTC+0530), Apr 15, 2019

Participants: David, Soujanya, Ishan, Anish, Sandup, Avner, Dylan

1. Introductions/Updates/Discussion
 - a. Dylan talks about
 - i. following the citizen science model as a form of interacting with the mesh network. [#48](#)
 - ii. incentives for people who will maintain skynet while the rest of us from Zanskar are not there. [#49](#)
 - iii. Whether there is a headman or a community leader who can pull the plug on this in Zanskar --- right now there is, as there is a central single point of failure in Karsha gumpa. We are expanding on the scope of decentralization technologically this year. More than one schoolserver will be present on the network.
 - b. Soujanya
 - i. Mentions that we have also been tasked with setting up a lab as a training and learning space for the mesh and activities around that.
 1. David says that emphasis must be placed on the HR aspect - who is there to maintain and oversee it, otherwise everything falls apart
 2. David stresses that it would be a great idea if people who are interested to learn about mesh network and maintain them can be brought to Dharamsala for some training. [#49](#)
 - ii. Talks about thinking about user interactions/interface and brings up the idea of Sugar OS as a metaphor, and looking at for design ideas.
 - c. Avner talks about his project on webrtc/telepresence and will share links relating to his work on this. Could be relevant to what we are considering for video streaming in Zanskar this year.
 - d. Naming scheme for audio and media files - exiftool is probably the thing we should look at to go through the media. David will share the option what will rename everything with time-date stamp as a good start to archiving.
2. Eka.to website .. done?
3. Pending issue triage
 - a. Zanskar
 - i. Decentralized live video streaming [#31](#)
 - ii. Ethnography, Documentation and Workshop plans [#27](#)
 - iii. Brainstorm IIAB/Mesh applications [#25](#)
 - iv. Troubleshooting mesh networks [#19](#)
 - v. Mesh node firmware design [#18](#)
 - vi. Create video podcasts [#17](#)
 - vii. Zanskar deployment blog post [#5](#)
 - viii. FreePBX IVR voice messages in Hindi and Tibetan [#33](#)
 - ix. mDNS/Zeroconf for ESP8266 sensor nodes [#35](#)
 - x. Purchase Zanskar inventory and tools [#44](#)
 - b. Milestone - 0.8

- i. Logo versions for media kit [#39](#)
 - ii. Setting up a minimal skynet [#37](#)
 - iii. Drone permit for india [#32](#)
 - iv. Zanskar agriculture research [#29](#)
- c. Milestone - Future
 - i. Reach out to go-green initiative [#43](#)
 - ii. Skynet captive portal [#42](#)
 - iii. Skynet SERVICES layer [#41](#)
 - iv. Skynet network model [#40](#)
 - v. Is there a strong case for having Wikipedia in Skynet [#36](#)
 - vi. Brainstorm the future of mesh communication [#38](#)
 - vii. Mud house design in zanskar [#34](#)
 - viii. Better understand financial and agricultural sustainability models [#26](#)
 - ix. Write about rakkar treasure hunt activity with children [#16](#)
 - x. Future of OSS Licensing: Wanted and unwanted use [#30](#)
 - xi. Comparing computing resources across available devices in market [#15](#)
 - xii. Decentralized grid connected solar [#24](#)
 - xiii. Model energy consumption of mesh network [#6](#)
 - xiv. Taxonomy of network issues [#22](#)

6. Monday 8:30PM IST (UTC+0530), Apr 1, 2019

Participants: *Nikita, David, Soujanya, Ishan, Anish, Prasenjit*

1. Nikita - 3 ways of thinking social behavioral, political, cultural
 - a. **1st layer** - ack the fact that what we are bringing could.. Map out digital divides and inequalities
 - i. Existing consumption of digital media
 1. Media can create inequalities. Need to think about it. If we introduce a mesh network, we need to think about the potential inequalities it can create. Map out digital divides and try and predict what other rifts and differences.
 - b. **2nd layer** - do research on zanskar. Contextual perspectives.
 - i. Read up on political economy, changes (in education), issues in class, gender, (list?), ethnic groups, gatekeepers etc. cultural activities, are they being lost, (and if so, why?), gen. Overarching tenets of social and political life
 1. Anish - possible to do interviews here (arnd Dharamsala).
 2. Soujanya - we had two guests
 3. Nikita - make sure you're looking at different perspectives. There's going to be a difference between what they say and what they do. Anybody who would have left zanskar would have some kind of cultural and financial capital (so be aware of that).
 4. Nikita - We have to understand how particular interests (for eg. Geshe la's) sit within a hierarchy of needs (@Mikko also talks about this - Rural hierarchy of needs)
 - 5.
 - c. **3rd layer** - better understand social workshops in zanskar. Eg. do focus groups
 - i. Soujanya, Nikita - Put together participatory workshops. Digital divide, contextual perspectives, focus groups. Design a package of things to put in on the network.
 1. Young people,
 2. Women,
 3. etc.
 4. Start open/broad...

5. Put the digital bits last (digital will be an enabler of solution, but does not discount this work)
2. **Anish - Keep this process visible - Create issues on github**
3. Nikita - This can be a pilot - so we could develop a set of tools that can be applied to different situation.
4. Next steps -
 - a. We can start with the people we have here
 - b. Put together an interview guide
 - c. Mapping exercises with adolescent girls
 - d. Nikita - New tools that have come across... (which?)
 - e. Tree of life
 - f. Find out about preexisting anthropological research in the ladakh/zanskar area
 - i. Interested in how buddhist models can be used in education/pedagogy
 - ii. What hard-core political economy stuff exists.
 - g. Anish - Think of connecting with Dylan
5. Funding situation?
 - a. About to be registered as a foundation in Finland
 - b. Botnar? Funder - get more data out of this trip to put together a better proposal for more funds this year.
6. Anish - Doing a basic PCB design and get feedback from David.
 - a. Define spec
7. David, Ishan - Documentation equipment
 - a. Sony A6000 - Does full HD
 - b. Sony NEX5 - Does full HD
 - c. Sound recorder - Sony UX560F
 - d. DIY Equipment for the studio
 - i. Basic Mic
 - ii. Basic Tripod
 - iii. Ishan - might send an email asking for advice
 - iv. Might wanna have lavalier mics, but again if it hinders quick production, then maybe not worth it
 - v. Quick - n - dirty - let the material evolve. Get the story, dont worry about quality from the get go.
 - e. Don't have extra budget right now to buy high end equipment
 - f. David has a zoom audio recorder that he can volunteer.
 - g. **David stresses on having a workflow -**
 - i. Standardize on particular software
 - ii. Throw everything in a database that is tagged, searchable
 - iii. Have standardization on filenames - Everyone follows the SAME format, so that it is easy to sort.
 - iv. Darktable -- too slow, database capabilities too slow
 - v. Everything in zanskar studio should be open source
8. Might wanna look into community radio for increased range, beyond wifi
 - a. Should speak with Phuntsok about it.
 - b. See if Zanskar CR can happen.
9. **Is it possible to get people from Zanskar come to Dharamsala to do their training here!**
 - a. Follow up with Chamba - Him Renewable Electrical person on his experience for training people from chamba
 - b. Speak to Nico if he's interested in helping - Columbian friend working in Naddi - Educare.

5. Monday 8:30PM IST (UTC+0530), Mar 18, 2019

Participants: *Adam, David, Mikko, Nivedha, Soujanya, Ishan, Sandup, Anish*

1. Personal updates/introductions

2. **Zanskar**

- a. Funds from Jampheh-la for the project. [Budgeting exercise](#).
- b. SECPAD workshop - still waiting on that.
- c. Prioritizing issues related to zanskar deployment
 - i. **Ethnography, documentation and workshop plans for Zanskar** - [#27](#)
(soujanya, ishan) - Some context below
 - ii. Design | Brainstorm mesh/IIAB applications [#25](#) (@everyone)
 1. **Discoverable, decentralized, cached live video streaming**. - [#31](#)
(prasenjit, mikko, anish)
 2. **Hindi + Tibetan translations for FreePBX** [#33](#)
 3. Brainstorm the future of communication within mesh [#38](#)
 4. Software Defined Radios - [iiab/#1564](#)
 5. Zanskar agriculture research [#29](#)
 6. Decentralized, grid connected solar [#24](#)
 - iii. **Web-presence | Blogpost for Zanskar deployment** [#5](#) - (anish)
 - iv. **Create video podcasts** [#17](#) (ishan)
 - v. **Budget for workshop in Zanskar (+ Soujanya's inputs)** [#1](#) (anish, soujanya)
 - vi. Design | Troubleshooting mesh networks [#19](#) (mikko, anish, prasenjit, energyguy)
 - vii. Design | Mesh node firmware design [#18](#) (mikko, prasenjit)
 - viii. mDNS for ESP8266 sensor nodes [#35](#) (anish)
3. Milestone - 0.8
 - a. Question | Setting up a minimal skynet [#37](#)
 - b. Question | Drone permit for India [#32](#)
 - c. Question | Where is the logo [#39](#)
4. Milestone - [future](#)
5. <yr-item-here>

4. **Monday 8:30PM IST (UTC+0530), Mar 4, 2019**

Participants: Adam, David, Mikko, Nivedha, Soujanya, Jitin, Ishan, Sandup, Anish

6. Personal updates/introductions
 - a. Jitin - Experience in Media and wants to explore how he can help Eka with any media/non-media projects!
 - b. Anish/Prasenjit/Soujanya/Ishan - Zanskar updates (see below)
7. **Zanskar**
 - a. Timeframe of visit - Between July and August
 - i. Ship items well in advance to either Jammu or Leh
 - ii. List of items -
<https://docs.google.com/spreadsheets/d/1a2oemhJFzckSZelOR8aqLD9x4iui0KiUWR05x0XMVz4/edit#gid=1711598411>
 - b. Spoke to Geshe-la and planning for Zanskar July to mid-August along with Soujanya, Ishan and Prasenjit
 - c. We may have some support from His Holiness Dalai Lama's Office - still WIP
 - d. Talks of getting a permanent room in the SECPAD School after meeting with the Director - stocked with tools and inventory to build mesh nodes, use for training locals (who are super pumped), teach kids at school how to computer (in a separate lab) etc. Basically, ENDLESS POSSIBILITIES!
 - e. Prioritizing issues related to zanskar deployment
 - i. Discoverable, decentralized, cached live video streaming. Making the infra more sustainable (They would not have had this idea until they heard from us that it's possible) - [#31](#) (prasenjit, mikko, anish)
 1. Monastery communication is considered very important - this is very delayed in reaching all villages right now

2. Religious teachings can be broadcasted
 3. Monks have been seen to be comfortable with using services like Whatsapp
 4. David's question: Can asterisk be used for live video streaming
 - a. Asterisk doesn't work for 1:many but is good for 1:1 (anish)
 - b. OBS can be used - MPEG Streaming - Access a webpage to connect to livestream (anish)
 - c. Future will have API and service-based interface. Dialing into an extension will become irrelevant (like using CSipSimple). But of course, we're far from that
- ii. **Ethnography, documentation and workshop plans for Zanskar - #27**
(soujanya, ishan) - Some context below
1. 10kms from main Zanskar Town
 2. Power cuts are bad but they have Solar backups which supplied power during the 3 weeks the squad lived there
 3. Residential school which is well-funded - Kids here can read, write and speak English and Hindi, and of course Zangskari
- iii. Design | Brainstorm mesh/IIAB applications #25 (@everyone)
1. What do we currently have in terms of voip/text/voice sms
 - a. Currently, voip calling runs on Asterisk (PBX)
 - b. Uses an app like CSipSimple to be installed on devices to connect - based on open Sip platform - supports most platforms like Windows, iOS, MacOS, Linux
 - c. Issue - IVR is currently in English but FreePBX can allow multi-lang IVR support. **Need to work on this**
 - d. Currently have no bandwidth prioritisation but this is an easy fix. Need to work on this - [iiab/#815](#)
 - e. CSipSimple did not work well for text messages, voice messages #33
 - f. NextCloud is set up on the school server - this can be used for messaging and calling! [iiab/#1548](#)
- iv. **Web-presence | Blogpost for Zanskar deployment #5 - (anish)**
- v. **Budget for workshop in Zanskar (+ Soujanya's inputs) #1** (anish, soujanya)
- vi. Design | Troubleshooting mesh networks #19 (mikko, anish, prasenjit, energyguy)
- vii. Design | Mesh node firmware design #18 (mikko, prasenjit)
- f. Critical discussions around mesh network deployment in Zanskar
- i. Adam: The November Actions: Defiance at MIT, 1969
<https://youtu.be/BPXAAsb0FoY> 'NUFF SAID
 - ii. Talked about not knowing the future effects of current-day actions - rope in Psychologists and Anthros. @Soujanya to rope in Nikita and @Mikko to bring in someone who is really experienced with this (name wasn't shared yet)
 - iii. Practical ways to share content without having to know what mp4 or Codec is? Open question
 - iv. Current source of information dissemination in Zanskar - Satellite TV!
 1. Traditions slowly lost
 2. Extreme polarization by media house
 3. Runs near 10-15 hours in each house
 4. Propaganda/disturbing slogans
 - v. Jitin - Younger generation cares about home - sends money regularly - India recorded for highest remittances. Trust the village to know what they want

- vi. Mikko - Villagers don't have a damn clue about what they want due to Technology shock
- vii. We share experiences
 - 1. Mikko<>Ladakh Experiences
 - 2. High influence of TV
 - 3. Kids leave to Delhi or Chandigarh - most do not come back
 - 4. Ones who stay get into tourism-related chores
 - 5. Earthquake-prone zone
 - 6. Valley mostly has ageing population
 - 7. Ladakh influencing other valleys to look at Tourism as an opportunity
- 8. Milestone - 0.6
 - a. Architecture/Design
 - i. Better understand agricultural financial and sustainability models - [#26,#29](#) (david)
 - 1. GoGreenGoOrganic - Seabuckthorn and Potato - running out of pasturable land
 - 2. Ice Stupas
 - 3. Half-buried-in ground Greenhouses but no water for cultivation
 - ii. Houses in Zanskar [#34](#)
 - iii. ~~Design | Compute resources thread [#15](#) (mikko, prasenjit)~~ Bumped to future milestone
 - b. Website + Videos + Blog**
 - i. **Website: Icons and map** [#21](#) - (soujanya, mikko)
 - ii. ~~Youtube channel art [#13](#) (sohail, ishan, soujanya)~~
 - iii. **Create video podcasts** [#17](#) - (mikko, ishan, soujanya, anish)
 - iv. Blog about Rakkar Treasure Hunt Activity [#16](#) - (soujanya)
 - c. Copyright/Licensing
 - i. ~~Copyright thread [#23](#) (mikko, anish)~~
 - ii. **Relevant details for README.md** [#10](#) (mikko)
 - iii. ~~Copyright | Given a magic wand, what are the ideal license/copyright terms EKA should adopt [#30](#)~~ Bumped to future milestone
 - d. Questions
 - i. ~~Should minutes live in gdoc or wiki [#12](#)~~
 - ii. Tools for skynet build and maintenance [#3](#) (mikko)
- 9. Milestone - 0.7
 - a. ~~Decentralized grid connected solar [#24](#)~~ Bumped to future milestone
 - b. ~~Model energy consumption of a wireless mesh network [#6](#) (mikko)~~ Bumped to future milestone
 - c. Web-presence | Links to website to increase search hits [#14](#) - @everyone
- 10. <yr-item-here>

3. [Monday 8:30PM IST \(UTC+0530\), Feb 18, 2019](#)

Participants: Adam, David, Mikko, Nivedha, Soujanya, Prasenjit, Ishan, Sohail, Sandup, Anish

- 11. Personal updates/introductions
 - a. Adam: a "local hero" (TLC = technology learning coordinator!) checking in via whatsapp-or-similar is critical, no matter how occasionally
 - b. David suggesting Ag-tech/sensors, hyperlocal weather data as potential apps
 - i. Predicting rain as potential application
 - ii. Keep a historical data record
 - c. Applications around water conservation
 - d. Mikko talking about applying deep learning models for these apps
 - e. Understanding the financial models around agriculture
 - f. Soujanya talking about methods to increase user engagement. Better docs, more interviews, and more ideas needed

- g. Cultural preservation - perhaps having a seed bank
- h. Perhaps to do a comprehensive discovery on the farming practices in Zanskar.
Perhaps find a person willing to do this as part of their academic study. Figure out what kind of seeds are available?
- i. Soujanya talking about ethnography related workshops conducted in Dharamsala, and suggesting to similar ethnographic studies conducted in Zanskar
 - i. Adam suggests our version of facebook (simple Craigslist-like discussion forums? SMS?) to help bring out these gossips/conversations out
 - ii. Soujanya brings up an example of cyber-fraud, and bringing up a case which led to discussion where people talk about the dangers of the internet
 - iii. Should we have a format for a workshop to do basic web-education
 - 1. Block all ads, tracking
 - 2. Not believe anything you read...
 - 3. Other items
 - 4. <Reject & Prevent - Be more constructive>
- j. Adam raised an interesting question that we will have to address at some point -- What are the preferred/used languages.
- k. Adam mentions the island using facebook as a craigslist buy+sell & social commons and what lessons maybe learnt from it
- l. Healthcare facilities - ideate around how eka might be a help.
 - i. Adam says that IIAB's max use is for medical knowledge consultation
 - ii. Write a blogpost about Mikko mentioning rural hierarchy of needs
 - 1. Education
 - 2. Economy
 - 3. Well being, health
 - iii. Adam discusses possible future call around local content/curriculum
- m. Mikko talked about having short calls between people working on specific things - subcommittees

12. Contributing

- a. Via github - <https://github.com/eka-foundation/home>
- b. Text channel/Voice calls on discord - #general on @EKA
- c. Blogposts - <http://medium.com/eka-foundation>
- d. Youtube - <https://www.youtube.com/channel/UCZqLHZKess48Kk42U4-WI5g>
- e. Graphics/media - <https://github.com/eka-foundation/media>

13. Milestone - 0.4

- a. Website + Videos + Blog
 - i. Website: Icons and map [#21](#)
 - ii. Youtube channel art [#13](#)
 - iii. Create video podcasts [#17](#)
 - iv. Blog about Rakkar Treasure Hunt Activity [#16](#)
- b. Copyright/Licensing
 - i. Copyright thread [#23](#)
 - ii. Relevant details for README.md [#10](#)
- c. Questions
 - i. Should minutes live in gdoc or wiki [#12](#)
 - ii. Tools for skynet build and maintenance [#3](#)
- d. Misc
 - i. ~~Upload Zanskar photos to drive~~ [#20](#)
 - ii. Budget for workshop in Zanskar [#1](#) + Soujanya's inputs
 - iii. Model energy consumption of a wireless mesh network [#6](#)
- e. Decentralized grid-connected solar [#24](#)

14. Milestone - 0.5

- a. Design | Troubleshooting mesh networks [#19](#)
- b. Design | Mesh node firmware design [#18](#)

- c. Design | Compute resources thread [#15](#)
 - d. Web-presence | Links to website to increase search hits [#14](#)
 - e. Web-presence | Blogpost for Zanskar deployment [#5](#)
15. <yr-item-here>

2. Monday 6:30PM IST (UTC+0530), Feb 4, 2019

Participants: *Mikko, Soujanya, Prasenjit, Sohail, Ishan, Anish*

1. Website/Presence:
 - a. Basic website is up, starting to show up in google search results [#14](#)
 - b. Link eka.to to personal links (especially if through a university) [#14](#)
 - c. Increase presence generally
 - i. Blog posts on medium [#16](#), [#5](#)
 - ii. Youtube channel - make podcasts perhaps
 1. Make small videos [#17](#)
 2. Don't worry about production quality
 3. Reference link: <https://www.youtube.com/user/unleashkids>
2. How to check if a node is working? How to troubleshoot? [#19](#)
 - a. How to make the mesh nodes communicate whats wrong
 - b. Must resolve to actionable human steps.
 - c. Think of how this may be done in a decentralized way.
3. Update from Zanskar:
4. 0.2
 - a. Zanskar blog post - Need photos [#20](#)
 - b. Power budget - follow up with @Energyguy3
5. Soujanya interested in writing a blog post for treasure hunt activity done in 2018 [#16](#)
6. Decentralization goals: Hardware [#15](#), Firmware [#18](#), Decentralization [#18](#)
 - a. Hardware: Is AR150 powerful enough? What other routers are there?
 - i. Mikko: AR150 plenty capable
 - b. [https://en.wikipedia.org/wiki/Avahi_\(software\)](https://en.wikipedia.org/wiki/Avahi_(software))
 - c. Firmware: How far do we deviate from openwrt?

1. Thursday 6:30PM IST (UTC+0530), Jan 24, 2019

Participants: *Mikko, Soujanya, Prasenjit, Anish*

1. **Anish**
 - a. Talking about the work that has been accomplished on IIAB
 - b. **TODO** - Make a budget to set up a small workshop in Zanskar. [#1](#)
2. **Mikko**
 - a. Forming a formal institution or structure to:
 - i. Communicating with people
 1. Contributors, replicators
 2. Attract grants, funding - NGOs, Govts, Private individuals
 - ii. Bring focus on - Internet, P2P, how people communicate.
 - iii. Created a narrative
 1. Two page document - pdf
 2. To build a website and identify meaningfully short and long term goals
 - iv. Created a budget
 1. Pay salary to Soujanya, Anish
 2. Facilitate plans
 - v. **TODO** - Create a Medium style blog for website - Register a custom domain with [medium.com](#) - [#2](#)
3. **Soujanya**
 - a. Worked on logo, but looking for new ideas, and explorations

- i. Website
 - 1. **TODO** - Palette, Logo, Font, Icon needed by Mikko [#4](#)
 - 2. Future - line drawings
 - b. Need for clarity in tasks for Zanskar
- 4. **Prasenjit**
 - a. Geshe-la will be here in Dharamsala in Feb and discuss this year's plan, so we can meet him and inform him about eka-foundation
 - b. Village youth clubs do a lot of social work. 2018 - made upto 60ft high ice stupa in Zanskar, and solved many engg. Challenges.
 - i. Website to facilitate local resources. Document local efforts and host it on zanskar-network
 - ii. Sandup will be going to Zanskar in June/July. Somehow get him involved.
 - iii. Set-up a small workshop with basic tools.
 - c. Think about budget for small workshop setup in Zanskar. Tools, training etc.
 - i. Mikko - Make a standard worksheet for making budgets
- 5. @Anish, Prasenjit - Deployment in Zanskar [#5](#)
 - a. Spec. sheet - Features
 - b. Technical details
- 6. When we go to Zanskar - Interview people with a local interpreter. Get video clips. Local ethnographic surveys.
- 7. Plan to go and visit the Sonam Wangchuk's school in Leh + Go-Green initiative
- 8. Learn from the success of Sonam Wangchuk's school + model and think about it
- 9. Propose models to Geshe-la
 - a. Working with monasteries?
 - b. Keep things inclusive
- 10. Content
 - a. Much content we package is already weaponized
 - b. Content creation can potentially become toxic, and how it may be addressed
 - i. Who is benefitting
 - ii. What interests are behind it
 - c. Need to think about it deeply
- 11. Broad guidelines for implementation
 - a. Will this not cause pain to people later
 - b. Will this cause joy
- 12. Model for energy consumption of the mesh network - [#6](#)

