

Endangered languages in social media

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Kevin Scannell
Cuir do Phróifíl in Eagar

CEANÁIN

- Fotha Nuachta
- Teachtaireachtaí 9
- Ócáidí 4
- Grianghraif

GRÚPAÍ

- Citizen Media and... 9
- African Languages 1
- Gaeilge Amháin 20+**
- Resource Network... 20+
- NAACL
- Dunwoody Class o... 1
- GaelSpell
- Cruthaigh Grúpa...

FEIDHMCHLÁIR

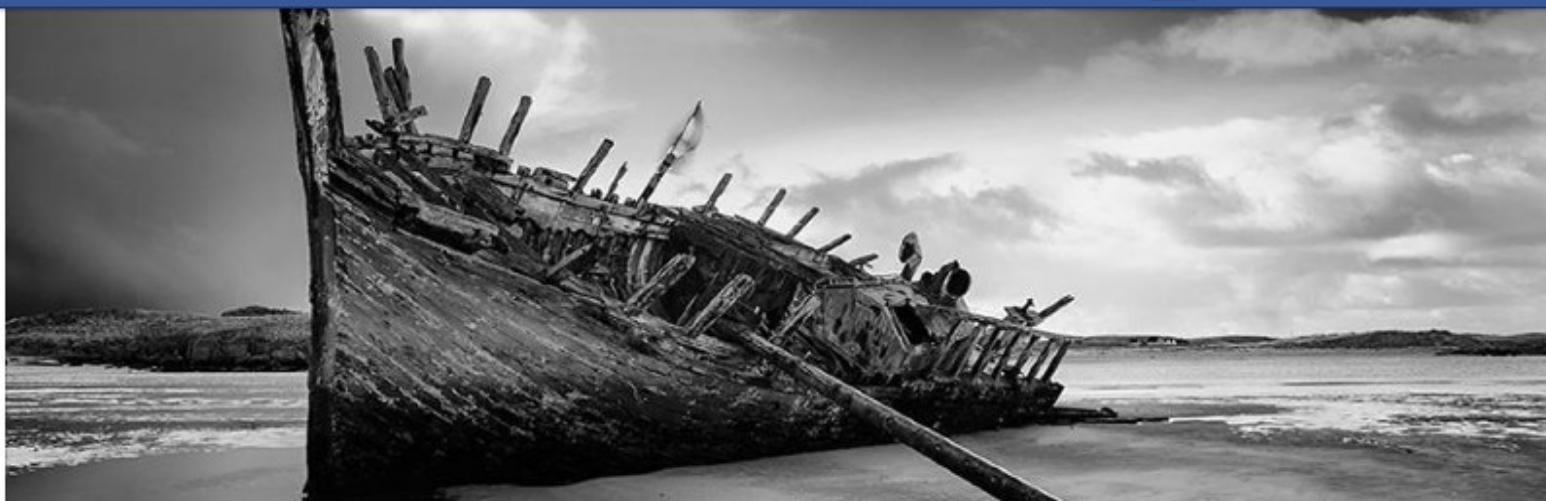
- Ionad na bhFeidhmchlár
- Aistriúcháin
- Fotha Cluichí 20+

LEATHANAIGH

- Pages Feed 20+
- Leathanaigh is ma... 20+
- Cruthaigh Fógra

TUILLADH

Tá an comhrá múchta.
Chun comhrá a bheith
seot le do chairde, cuir



Gaeilge Amháin

Eolas Faoi/Fúithi

Ócáidí

Grianghraif

Comhaid

🔒 Fógraí

+ Cuir Grúpa ar Bun

⚙️

Q

✉️ Scríobh Postáil 📷 Cuir Griangraf / Físeán Leis 🗨️ Cuir Ceist 📄 Comhad

Scríobh rud éigin...

2.676 ball (134 nua) · Tabhair Cuireadh Trí Ríomhphost

+ Cuir Daoine Leis an nGrúpa

TEACHTAIREACHTAÍ LE DÉANAÍ



Gearóid Ó Hanaidh

Thóg mé griangraf den fhógraíocht 'Guinness' seo i nDún na nGall le déanaí.

An bhfaca sibh fógraíochtaí eile mar sin i nGaeilge?



📷 Is maith liom · Déan trácht · Follow Post · Roinn · 13 uair ó shin

👍 Is maith le 3 duine é seo.

👤 Maitiú Ó Coimín Rud eicint mar sin ar fud Chathair na

Grúpaí Molta

See All



Dúograiseoirí na Gaeilge

Tá Brian Ó Conchubhair agus 79 cara eile páirteach ann

👤 Glac Páirt sa Ghrúpa



Cumann Gaeilge na hAstráile Iris...

Conradh Na Gaeilge joined

👤 Glac Páirt sa Ghrúpa



Folk Club Plancoet

Tá Aisteoirí le Gaeilge agus 8 cara eile páirteach ann

👤 Glac Páirt sa Ghrúpa

🌐 72%

👤 Comhrá (múchta)



Follow

Promoted



ENTRECruzados @entrecruzad... X

Follow



MoonStone Paranormal @Paran... X

Follow

Popular accounts · Find friends

Trends · Change

Congress

#IllNeverDateAPersonWho

#GhostAdventures

#NoWarWithSyria

#ThisIsUs

Rose Garden

#IfCartoonsWereReal

A&M

President Obama

White House

Tweets



Peter Hill @PeterPaha

26 Aug

Blokétu čan̄ ḥtayétu ečhíyatar̄han̄ tuktéktel t̄han̄kál wačhéun̄papi na yuphiya šolmná hiyú čhán̄na šna líla čan̄lwáštēmaye.Oíyokhiphi yeló #Lakota

Expand



Peter Hill @PeterPaha

25 Aug

Letán̄han̄ šaglóǵan̄ čan̄ kiŋ mitháwiču kiŋ hokšíyuha kta iyékičihan̄tu. Líla iblúškiŋ yeló. Hokšíla naiŋš wičhín̄čala kta héči slo'úŋkiyapi šni

Expand



Peter Hill @PeterPaha

22 Aug

@SupportSDrez :)

View conversation



Peter Hill @PeterPaha

21 Aug

Mázaska óta uŋkíglamnapi hántan̄ wašté kte. Héčhel owáyawa uŋkít̄hawapi kiŋ t̄hokátakiya yeyín̄ kte. Wak̄hán̄yeža óta wačhín̄un̄yan̄pe ló. #Lakota

Expand



Peter Hill @PeterPaha

21 Aug

PLEASE RETWEET AND SUPPORT OUR IMMERSION DAYCARE PROGRAM!! WÓPHILA!! crowdrise.com/lakotaimmersio...

Expand



Peter Hill @PeterPaha

16 Aug

Wóop̄he t̄héča kiŋ uŋ óta líla iyókhiphi šni, na anápte wačhín̄pi kta kéyapi. Iyúth̄api okhiphi éyaš waná ečhétu na pažúžu phičá šni

Watinkhani ta Luso ndi Umisiri

Tuesday, January 17, 2012

Chaka Chatsopano kwa Nonse

pa 11:23 Wolemba [Edmond Kachale](#)

Ndikulandireni mwapadera abale nonse amene mumakonda kuwerenga nkhani pa bwalo lino. Ndikukhulupirira kuti mwachimaliza bwino chaka cha 2011, ndipo mwayambapo kukwaniritsa ena mwa malingaliro amene muli nawo a mchilumika chino cha 2012.

Chaka cha 2011 chinali chopambana ku chiyankhulo cha Chichewa chifukwa pali zinthu zingapo zimene zinachitika zomwe zakupititsa patsogolo kugwiritsidwa kwa Chichewa pa utatavu ndi m'kopsuta. Mwa zina, mphunzitsi wa sukulu ina ya ukachenjede ku Amereka, a [Kelvin Scannell](#), anatsegula madambwe awiri: <http://indigenoustweets.com> ndi <http://indigenousblogs.com> omwe akupititsa patsogolo kugwiritsidwa ntchito kwa ziyankhulo zachimidzimidzi pa utatavupa. <http://indigenousblogs.com> ndi *ndala* chabe la indigenoustweets.com/blogs.

Kwa amene sanamvepo za madabwewa, tingonena mopaza. indigenoustweets.com imatolera mitongoliro pa [Twitter](#) kaundula wa akadyolidyoli a ziyankhulo zosiyanasiyana. Apapa dzina loti akadyolidyoli silikutanthauza akavuwewuwe osokoneza, koma awa ndi anthu amene amakhala akutumiza timitu tankhani (mitongoliro) pa Twitter kuthandiza enafe kumva zochitika mmaderamu. Momwemo, dambwe la <http://indigenousblogs.com> limatolera zibaluwa zolembedwa mziyankhulo zimenezi. Dambwe limeneli ndi njira yothandiza kuti mudzitha kupeza nkhani m'ziyakhulo ngati zathuzi mosavuta. Mukudziwa kuti nkhani zambiri pa utatavupa zimakhala m'Chingerezi, m'Chifalaansa ndi ziyankhulo zina zomwe zili ndi mphamvu pa chuma ndi chitukuko. Nkhani za m'Chichewa zimapezeka pa <http://indigenousblogs.com/ny> (kapenanso ulalo wotanimphirako: <http://indigenoustweets.com/blogs/ny>). Ndili wokondwa kuti mwa ziyankhulo zina zomwe zilipo, Chichewa chinali chimodzi mwa zoyambirira kuyikidwapo pa m'ndandanda owoneka nawo pa madambwe amenewa.

Followers

About Me



[E](#) **Edmond Kachale**

I don't know how to break a record. All I know is how to build it. Now, I let others break mine!

[View my complete profile](#)



Máirtín Crosach @MairtinCrosach

3 Jan

Tigh McCormack...? Ní de ghlascloich an Oileáin í... [#crénacille](#)

Expand



Caitríona Pháidín @CaitrionaBot

3 Jan

.@Bileachai Mara de ghlascloich an Oileain í, níl meas cnó caoch agam uirthi. [#crénacille](#)

Expand



Muraed Phroinsiais @MuraedPhrions

3 Jan

Ní de ghlascloich an Oileáin í mar sin. [#crénacille](#)

Expand



Nóra Sheáinín @NoraSheainin

3 Jan

Tigh Mhóráin a bhíos glascloich an Oileáin. [#crénacille](#)

Expand



Beartla Cois Dubh @Beartla

3 Jan

🎵 'Hóró a Mháire do mhálaí 'sdo bheilteannaí'. 🎵 [#crénacille](#)

Expand



Muraed Phroinsiais @MuraedPhrions

3 Jan

Ní bhíonn crois de ghlascloich an Oileáin ag McCormack. [#crénacille](#)

Expand

Language Revitalization

- I am not a linguist!
- I come to this work as an Irish speaker
- Began working to help my own community 1999
- Proofing tools, dictionaries, software translation
- Tools to help languages flourish online
- Have developed resources for 150+ languages

Social media: advantages

- Often solves the “critical mass” problem
- Connects learners and native speakers
- Informal medium; welcoming for learners
- Short bursts: use the words, phrases you know

Social media: disadvantages

- Written medium only
- Anxiety about spelling and grammar
- Difficulties typing the language (diacritics, etc.)
- Shyness in a public forum, w/ fluent speakers
- Impossible to immerse oneself in the language

Some Perspective

“The internet and digital world cannot save us. They cannot save Indigenous languages. Of course these things have benefits but they are not the Messiah. We don't need another website or DVD or multi-media application, these are short term, quick fix solutions. What we really need is sustainable initiatives, to create opportunities for Indigenous language users to communicate with each other in their native tongue. To get people speaking again.”

John Hobson, University of Sydney, 16 May 2013

<http://au.artshub.com/au/news-article/news/arts/digital-not-always-the-answer-195370>

Social media and linguistics

- Many of you *are* linguists interested in research
- “Live” examples of language in use
- “Real” language; not Bible translations
- Readily accessible text, often in great quantity
- Allows social network analysis

Disadvantages

- Privacy and consent
- Facebook, Twitter terms of service
- Written language only
- Informal language, code-switching
- Non-standard spelling, encodings, other “noise”
- Tweets, e.g., represent a “sublanguage”

Demo of Twitter API

- Twitter allows developers access to tweets
- Streaming API lets you follow tweets live
- Can follow set of users, words, hashtags
- `$ perl live.pl się`
- `$ perl live.pl @BarackObama`
- `$ perl live.pl '#Syria'`

100 million Twitter project ideas

- Offers a host of possibilities for ling. research
- Regional dialect analyses (geocoded tweets)
- Compare dialect and social network (more I8r)
- Measure relative vitality of minority languages
- Twitter as a sublanguague; hashtags, etc.
- Code-switching in tweets
- Lexicography

Indigenous Tweets

- <http://indigenoustweets.com/>
- Launched March 2011
- Community-building on Twitter
- Tracks all tweets in 149 languages
- 61828 accounts, 12+ million tweets
- 33 languages with only a single tweeter

Language	Users	Tweets	Top User	Tweets	First Tweet
Euskara	17042	4629179	berria	43464	eastigarraga
Kreyòl Ayisyen	14267	3801664	RoodHT509	49006	tichrist
Cymraeg	14218	2461608	newyddcymraeg	57703	meigwilym
Kapampangan	1379	1560984	itsmeshellie	19449	desperada
Frysk	2048	571851	omropfytsban	61042	vogelzang
Setswana	314	564575	sesutho	30409	WameDre
Gaeilge	7388	472825	aonghusoha	24336	imeall
Asturianu	749	254257	iyangc	16439	Pingarates
Hausa	300	236400	bbchausa	20128	Richee_Rich
Soomaaliga	558	141671	Weedhsan	15895	HaPpYMaXaMeD
Gàidhlig	652	93423	sconewt	27303	ruighean
Māori	335	89391	maonewt	29810	DigitalMaori
Gaelg	26	85533	glvold	40479	greinneyder
Chamoru	9	61894	chanewtest	25699	jenccamacho
Tamasheq	3	57363	tmjnew	27484	tmjbbi
Aragonés	80	54292	Purnas	13655	jesmar
ꦲꦶꦫꦺꦤ꧀	25	50931	mvblogs	9788	muraasil
Winaray	33	40969	ilovetacloban	6665	piamaemendz
Malagasy	252	36356	Ainjah	4450	elsifaka
Chicheŵa	142	32994	skinnybrizzo	6642	caseynesbit
יידיש	260	31102	jewish_wire	11553	ZackBergerMDPhD
Occitan	98	29001	occitania	8736	sbagudanch
Cántabru	13	28523	Xoselnaciu	5786	r_macho
Emiliàn e Rumagnòl	53	28078	ingiro_concerti	2339	Ze_Beps
Tshivenda	25	26892	mirimat	8875	its_tshima












INDIGENOUS TWEETS.COM

Blog

Indigenous Blogs

Kevin Scannell



↕ Úsáideoir ↕		Gaeilge ▾	Iomlán ↕	% Gaeilge	↕ Leantóirí ↕	Á Leanúint	↕ Gioll Is Déanaí ↕	
1	aonghusoha		24336	28340	85.9	788	536	2013-08-23 21:04:23
2	Tuigim		13316	19090	69.8	833	981	2013-08-23 23:04:57
3	maitiuocoimin		8162	10277	79.4	676	990	2013-08-24 00:38:22
4	KingDonncha1		7010	8699	80.6	255	181	2013-08-24 04:13:50
5	murchadhmor		5892	7196	81.9	1006	1686	2013-08-23 08:24:43
6	Foinse		5454	6199	88.0	4407	4325	2013-08-23 15:55:59
7	TG4TV		4979	8549	58.2	8184	2527	2013-08-24 08:55:53
8	Tuairisceoir		4891	5900	82.9	3356	3684	2013-08-23 16:15:31
9	SachiEika_Bot		4811	85341	5.6	541	293	2013-08-24 05:13:12
10	GAA_BEO		4340	79142	5.5	16703	2401	2013-08-23 20:41:08
11	Gaelport		4121	6036	68.3	3092	2508	2013-08-23 11:29:28

INDIGENOUS TWEETS.COM

Gaeilge

I mbéal an phobail:

- #ilaughed
- swagam
- swagat
- #culturenigh
- #jobfair
- n-éirínn
- bPrátaí
- #potatoday
- blicht
- #igcomhrálemairtín

Daoine ar iarraidh?

Ainm Twitter:

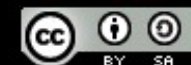
@

Inis don domhan go bhfuil tú anseo:

Blog

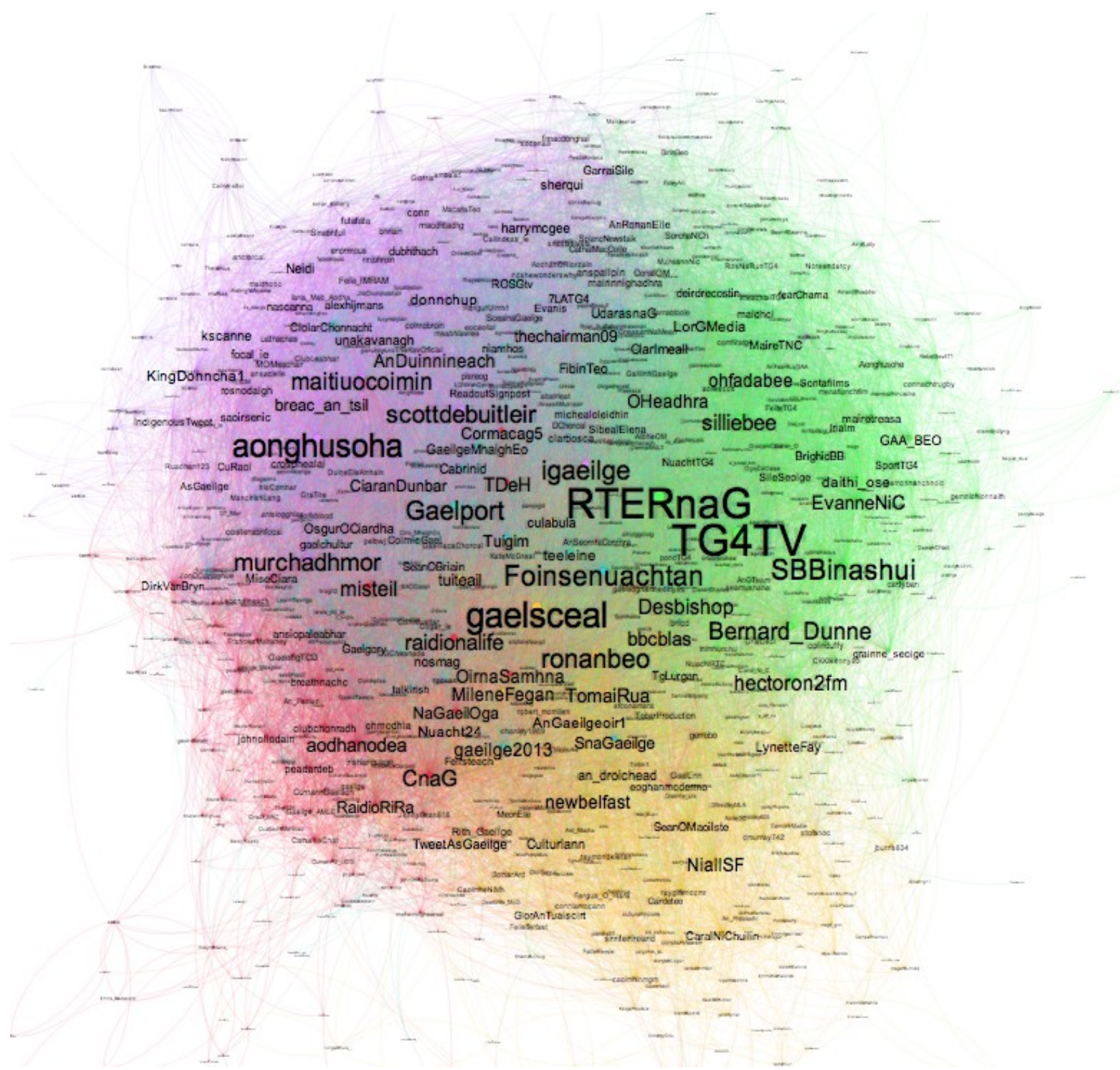
Indigenous Blogs

Kevin Scannell



Network analysis

- Twitter contains a couple of social graphs
- Nodes correspond to Twitter accounts
- The “follow graph”
- The “mention graph”
- Both are *directed* graphs





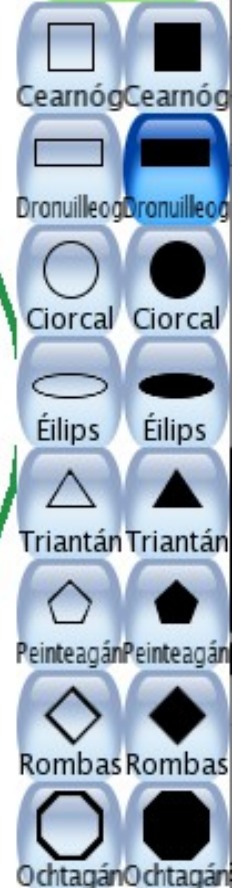
Software Localization

- Translate menus, navigation, etc.
- Critical for language revitalization
- Otherwise, English is language of the computer
- Hopefully influences people's language *use* too

Uirlisí



Cruthanna



Dathanna



Roghnaigh cruth. Cliceáil chun an lár a roghnú, tarraing, ansin scaoil an cnaipe nuair atá an méid socraithe agat. Bog chun é a rothlú, agus cliceáil arís chun é a dhearadh.



Aurora Comhad Eagar **Amharc** Stair Leabharmharcanna Uirlisí Fuinneog Cabhair

Inbox - kscanne@gmail.com - G... language television channel - Teilifís Gaeilge

www.tg4.i... TG4 Leathanach Baile - Irish la... Google

Suímh FF IT

Mar fheabhas ar an Suíomh seo, baineadh úsáid as cookies. **English**

TG4 súil eile

TG4 Player | Cláir | Sceideal | Léiriúchán | Comórtas | Spórt ar TG4 | Nuachtlitr

Seinnteoir TG4
Na Cláir is Déanaí...

Ros na Rún Ros na Rún Nuacht TG4

Pop Corn TV Angelo Rules Nuacht TG4

Caith súil ar seo...

Nuacht | Spórt

Tá scrudú iarbháis le déanamh inniu ar chorp na mná a fritheadh in árasán san Uaimh i gCondae na Mí aréir. Tá na Gardaí amhrasach faoin mbealach a bhásaigh sí.

Tá an Stát ag déanamh comóradh inniu ar Fhrithdhúnadh mór Bhaile Atha Cliath 1913.

language television channel - Teilifís Gaeilge

TG4 Leathanach Baile - Irish la...

Google

TG4

le fianáin Eolas

English

TG4 Player Cláir Sceideal Léiriúchán Comórtas Spórt ar TG4 Nuachtlitr

Seinnteoir TG4 Na Cláir is Déanaí...

Ros na Rún Ros na Rún Nuacht TG4

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Tá an Stát ag déanamh comóradh inniu ar Fhrithdhúnadh mór Bhaile Atha Cliath 1913.

Uath-Bhrathadóireacht

- ✓ (Múchta)
- Cóiréach
- Oirthear na hÁise
- Rúiseach
- Seapánach
- Síneach
- Síneach Simplithe
- Síneach Traidisiúnta
- Úcránach
- Uilechoiteann

Tuilleadh lonchóduithe

- lartharach (ISO-8859-1)
- ✓ Unicode (UTF-8)
- Lár-Eorpach (ISO-8859-2)
- lartharach (Windows-1252)
- lartharach (ISO-8859-15)

Saincheap Liosta...

LibreOffice Comhad Eagar Amharc Ionsáigh Formáid Tábla Uirlisí Fuinneog Cabhair

Gan Teideal 1 - LibreOffice Writer

Stíl Réamshocraith serif

Litriú agus Gramadach: Gaeilge

Teanga an téacs Gaeilge

Níl sé san fhoclóir
mó ná céad is daichead carachtar i dtweet amháin.

Moltaí
dTéide

Seiceáil gramadach

Lig thar 1x
Lig thar i gcónaí
Cuir Leis
Athraigh
Athraigh Gach Rud
UathCheartaigh

Cabhair Roghanna... Cealaigh Dún

Cad iad na buntáistí a bhaineann le dtosach báire, inár gcomhthéacs i do chónaí i gcathair mhór, sea cheantar. Trí na meáin shóisialta...

I gcás na Gaeilge, tá formhór plé Cliath, i mBéal Feirste, nó in áite ceangal le cainteoirí ó fhoinse sa bhí dodhéanta deich mbliana ó...

Tá na meáin shóisialta bunaithe ar gníomhaí i measc phobal na dtíochta; go leor comhcheanglaí is déanaí, ar pholaitíocht, cúrsaí spóirt, mar sin de.

Creidimse go bhfuil Twitter an-oiriúnach d'fhoghlaimoirí an dara teanga, mar nach gceadaítear níos mó ná céad is daichead carachtar i dtweet amháin. Den chuid is mó (agus b'fhéidir mar gheall ar an teorainn seo), tá an teanga níos simplí ar Twitter ná sna nuachtán nó in úrscéalta. Agus, le cúnaimh Dé, beidh foghlaimoirí níos sásta an cúpla focal atá acu a úsáid.

Is páirt thábhachtach d'fhoghlaim teangacha an léitheoireacht agus an scríbhneoireacht. Tugann na meáin shóisialta deis do fhoghlaimoirí an teanga a léamh agus a scríobh i gcomhrá nádúrtha le fíorchainteoirí; mar chomhlánú do cheachtanna sa seomra ranga nó féinstaidéar.

Aimsigh

Leathanach 1 / 1 Focail: 292 Stíl Réamshocraithe Gaeilge 100%

Пётёмёшле

Пётёмёшле майлаштарни

Итлеме майлаштар

Сасәсем

Курав ёнерлевё

Skype WiFi

Вәрттәнләх

Систерни

Шәнкәравсем

Аҫ та СМС

Хушма

Sounds: Customize sounds for calls, IMs, alerts and notifications

Мёне пула саса янратармалла

- янрав сасси
- dial tone
- хутшәнтарни сасси
- звонок в режим ожидания
- шәнкрава малалла тәсни
- Явәҫатпәр шәнкәравласа
- шәнкравлама пәрахни
- шаккаты
- шәнкәрав йәнәншө 1
- шәнкәрав йәнәншө 2

Хәш сассине вылятармалла суйла

Skype чөнү сасси (хальхилле)

Сассине итле

Мөнпур сасәна пултар

Яланхиллисем ларт

Ман харпәр сасәсем

Сасәсене импортла

Упра

Пәрахәсла

Software as a Service

- Above examples are standalone software
- Also, excepting Skype, open source!
- More and more software is online-only: “SaaS”
- Gmail, Google Docs, Facebook, Twitter, ...
- Need special permission to translate these sites

Facebook translations

- Facebook has about 100 “official” translations
- Almost all “crowd-sourced” translations
- Translate “live”, with a voting system for QA
- Spanish was the first non-English locale, 2008
- A few endangered languages were “lucky”
- Irish, Welsh, Basque, N. Sámi, Cherokee, ...
- No new languages added in 2+ years
- This despite great demand, petitions, etc.

Solutions?

- Pressure from each group individually?
- Each lang works their contacts “on the inside”?
- Legislation, rights-based approaches?
- Develop your own social network?
- Don't let your kids onto Facebook?

Secwepemc Facebook

- Idea of Neskie Manuel, orig. for his language
- Greasemonkey scripts; a kind of “overlay”
- Runs in your browser, no permission needed
- Translations into 31 languages ready for use
- 25 other languages underway
- Majority are endangered
- Majority have never translated *any* software
- Goal: more unofficial than official translations!

Sharing Metaphors

- “Computer” (sorter, lightning brain)
- “Link” (bridge)
- “Domain” (secret initiation camp)
- “Cookie” (cuckoo's egg)
- “Cache” (leftovers)
- “Keyboard” (fingerboard vs. musical instrument)
- “De-interlacing” (de-cross-weaving)

Terminology Wiki

- Most languages have had to coin new terms
- Technical terms (“mobile upload”, “cookie”)
- Facebook-specific (“like”, “poke”, “news feed”)
- Western concepts (“privacy”, “advertising”, etc.)
- <http://github.com/kscanne/secwepemc-facebook/wiki/Back-Translations>
- Please add your own!!

Chichewa

facebook  Fufuzani anthu, malo ndi zinthu 

 **Edmond אדמונד Kachale**
mphindi 51 zapitazo pafupi ndi Soche, Blantyre · 

Kugwiritsa ntchito Facebook m'Chichewa kumandisangalatsa zedi.

Kondani · Chitani ndemanga · Gawani

 Anthu 3 akonda izi.

 **William Sululu** Bt wat's facebk in chchewa?...iz t "nkhope-buku?"....kkk
mphindi 39 zapitazo via mobile · Kondani

 **Edmond אדמונד Kachale** William, ndikukamba za izi: <http://userscripts.org/scripts/show/126642>

 **Facebook m'Chichewa for Greasemonkey**
userscripts.org
Kutanthauzira Facebook m'Chichewa

mphindi 34 zapitazo · Kondani ·  1

 **William Sululu** Ok, gt U..bt w stl nid to hv the name itself in chchwa z wl...ukuona bwa? Kkkk

Kriol

facebook 

Lukabat pipul, pleis o enijing 

sure, my laundry in drier across 55th Street, I'm really easy please.

Laigim · Raitim samting · 16 awa bifo via mobile · 

 2 pipul laigim dijan.

 Kevin, raidim samting...

 **EUROPEAN FREE ALLIANCE** via FUEN / FUEV / UFCE – Fed Union of European Nationalities

 <p>ERNATI YOUTH for world, parttime</p>	<p>International Youth Day, 12 August www.un.org</p> <p>Collective and concerted effort is needed to respond to the pressing global challenges faced by young people, and partnering is key to harnessing such</p>
--	---

Laigim · Raitim samting · Shoim dijan la yu frenmob ·  2 · 13 awa bi

 **The Kriol**

Manx Gaelic

facebook  Shir son sleih, buill as reddyng 

 Kevin, screeu baght er ...

 **Adrian Cain**
First Manx Language Film Production
<http://www.manx.net/tv/mt-tv/watch/6389/first-manx-language-production>

 **First Manx Language Production | MT TV | ion news on demand manx.net**
www.manx.net
Solace in Wicca, the Islands First Manx Language based on the true events of 1617 when a mother




 S'mie lhiam shoh · Cur baght er · Follow Post · Rheyynn · 23 Jerr ec 3:45am faggys da Douglas, Isle Of Man


 S'mie lesh 7 persoanyn shoh.

 Jeeagh er ny 3 baghtyn oilley




 **Adrian Cain** Fair point: first film to cost a lot of money!

K'iche'



facebook    Utzukuxik winaq, k'olib'al, y chokonisab'al

 **Snorri Sturluson**






AJAWATALIK




-  **B'anoj**
-  Taq oqxa'n **35**
-  K'ulmatajem **6**

PÁGINAS Y ANUNCIOS

-  Administrador de anuncios
-  Centro Histórico y Educativ...





WOKAJ

-  Sociedad Esférica y Filantró...
-  Jedi Church (The ori... **20+**
-  Hands@Guatemala **20+**
-  Sociedad Esférica y Filantró...
-  Uwinaqirisaxik jun Wokaj...

 **Chomanik**  **Wachib'al / Silob'wachib'al**  **Uta'ik k'otoj chi'aj**


¿Jas tajin kachomaj?


UCF

 **Snorri Sturluson**  
k'ate 51 kajb'al kanoq 

Luis, Biviana, Chiky, Elias, Elena: rajawaxik kinwesaj jun wachib'al re le facebook pa k'iche' rech kapaqab'ax pa jun uxaq web'. Jas tajin kib'ano?

Utz kinwilo · Utzijoxik · [Ukomonexik](#)

 **Elena Tambriz** Utz la' kaqesaj.
k'ate 47 kajb'al kanoq · Utz kinwilo

 **Francisca Biviana TumMacario** Utz la'
k'ate 34 kajb'al kanoq · Utz kinwilo

Workshop: Gephi

- <http://www.gephi.org/>
- Sample data; mention graphs from Twitter
- Māori, Gàidhlig, Welsh, Chichewa, Irish, Basque, Asturian
- <http://borel.slu.edu/obair/gdf.zip>