Dime phonological overview and suggestions for writing consistently

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This overview is based on 3 weeks of working with two dedicated Dime speakers. During this time, a corpus of 750 words has been collected. This limited dataset is skewed towards nouns (about 570 items); verbs are underrepresented. The suggestions for writing given in section 5 must therefore be seen as preliminary and subject to change.

Previous linguistic research of the Dime language includes

- Fleming, Harold (1990). A grammatical sketch of Dime (Dim-af) of the lower Omo. In: *Omotic Language Studies*, R.J. Hayward (ed.), pp 494-583, London: SOAS.
- Siebert, Ralph et al. (1995). A survey of the Dime language. *S.L.L.E. linguistic reports* 31: 2-14. [published electronically as: Sociolinguistic survey report on the Dime language of Ethiopia. *SIL Electronic Survey Reports* 42606. http://www.ethnologue.com/show_author.asp?auth=7136]
- Mulugeta Seyoum (2008). *A grammar of Dime*. Utrecht: LOT.
- Ute Olschowy (2016). Unpublished results of a 2-week orthography workshop. [2]

Both Mulugeta's and Olschowy's work have been used in the present study. The main goal of the present work is to fill some gaps indicated by Olschowy in her report, namely the need for a more detailed study of vowels, and the start of tone research. In addition, this study confirms most of her consonantal phoneme analysis.

Section 1 discusses vowels, section 2 consonants, section 3 phonotactics, and section 4 tone. Section 5 gives suggestions for a consistent way of writing the language in Sabean and Latin.

[1] I want to express my thanks to Ato Tona Bedil and Ato Simeon Nipise, the Dime speakers; and to SIL Ethiopia for preparing the workshop led by Dr. Constance Kutsch Lojenga. Any comments or questions on the paper can be sent to anne-christie_hellenthal@sil.org.

[2] I am very grateful to Ute Olschowy for sharing her results, which served as a basis for the present research. All faults of the current analysis remain mine. In addition, Sara Petrollino helpfully sent a preliminary version of her thesis on Hamar.

1. Vowels

1.1 Vowel phonemes

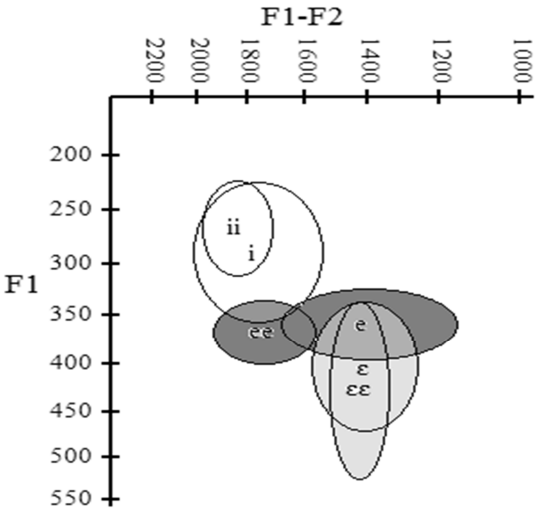
The language appears to have 7 vowel qualities, appearing both long and short.

Table 1. Vowels

	front	central	back
high	i ii		u uu
mid-high	e ee		(o oo)
mid-low	ɛ ɛɛ		ɔ ɔɔ
low		a aa	

Six of the vowels are readily identified by the speakers. Even though the front vowels are acoustically close (see Fig 1), the speakers learned quickly to distinguish the three of them.

Figure 1. Front vowel formants in CV(V).CV nouns



The mid-high vowel **o** is not perceived by the speakers as a distinct vowel in most cases, though there are occasions when one speaker has said it is neither a "proper **u**" nor a "proper ɔ". One reason for not perceiving the mid-high back vowel as a separate vowel might be that fidel[3] offers only two ways of writing back vowels, whereas it offers four ways of writing front vowels. Since most African languages have a symmetric vowel system, and since the vowel is also attested in the closely related language Hamar (Petrollino 2016:29), further research may show that the vowel **o** is indeed phonemic. However, it does not bear a

[3] Name of the Sabean script (abugida) in which the national language Amharic is written.

high functional load in the current data set. Because of its uncertain status, the rest of this work generally does not refer to this vowel[4]. **ɔ** is used uniformly in the rest of the examples.

The vowel quality of the vowels, especially of high front vowels, may alter due to length and syllable structure, as shown in example (1). In syllables with a short vowel and short closed syllables, the vowels are centralised[5]. /**e**/ also often sounds centralised when it occurs word-finally. All of this variation is phonetic, not phonemic.

1)	tììré	[tì:rɘ́]	'rug'	dim	[dím]	'Dime'
	gɛ́ɛ́rè	[gɛ́:rɘ̀]	'terrace'	t'ɛ́l	[t'ɛl] ~ [t'ɜl]	'flour'
	k'ɛ́ɛ́ré	[k'ɛ́:rɘ́]	'door'	él	[ʔɘ́l] ~ [ɨ́l]	'newest leaf'
	bààké	[bà:kɘ́^{h}]	'hearth stones'	k'áp'	[k'ɑp'] ~ [k'ɐp']	'tongs'
	úúrèn	[ʔú:rɘ̀n]	'rat'	tússèm	[t^{h}ús:ɘ̀m]	'seven'

Phonetically, a vowel with a H tone in word-final open syllables may sometimes sound longer and somewhat breathy, as indicated in example (2).

2)	ʃèjé	[ʃèjə́^{h}]	'tick'

1.2 Vowel length

Vowel length is phonemic in Dime. All vowels can appear long and short. Length is shown by doubling the vowel symbol, except between phonetic brackets. In monomorphemic nouns, long vowels only occur in the first syllable. Example (3) shows some (near) minimal pairs contrasting vowel length.

3)	ííné	'sheep'	ínè	'today'
	éél	'hare'	él	'newest leaf'
	ʃɛ̀ɛ̀mé	'pray, petition'	ʃɛ̀mé	'prayer'
	ááfé	'eye'	áfè	'mouth'
	gɔ́ɔ́rù	'heap of stones'	gɔ̀rú	'grave'
	zúúlù	'shinbone'	zùlú	'rainbow'

[4] A set of recordings of all vowels in different CV-structures has been collected for further analysis.

[5] Thanks to Dr. Constance Kutsch Lojenga for her advice to take syllable structure into account. Not rigidly doing so may lead to larger but faulty inventory of vowels (Mulugeta 2008:25, though he notes asymmetry in the system).

1.3 Distribution of vowels

This section describes the distribution of vowels in nouns that end in a vowel and nouns that end in a consonant. Note that the vast majority of mono-morphemic nouns that end in a vowel have **-e** or **-u** as the final vowel, with **-u** occurring mostly following back vowels, with only few exceptions.

4)	-e#		-u#	
i	dííbè	'thief'	_	
e	sékè	'bat'	_	
ɛ	k'èèré	'door'	zéétú	'month of August'
a	áxʃè	'clay'	àtsú	'old man'
ɔ	_		ɔ́rxú	'fish'
u	_		gúúrù	'crocodile

Of the handful of nouns ending in **-a**, most are names for female persons. One noun out of more than 500 ends in **-ɛ**. Examples are given in (5). Note that some of the nouns for females as well as the word for 'sibling-in-law' have a HL tone on the last syllable, suggesting there might be a suffix involved.

5)	bɛ̀tá	'animal sp.'
	gúútʃ'â	'marriage name for a tall, slim woman'
	búʃâ	'marriage name for a red-skinned, fair-shaped woman'
	téésê	'sibling-in-law'

For monomorphemic nouns that do not end in a vowel, the picture is more varied: all vowels can appear as V2. However, the back vowels do not occur following front vowels[6]. The same type of restriction is claimed for Hamar (Petrolino 2016:31). The other gaps may be due to limited data.

Table 2. Vowel combinations in nouns ending in a consonant.

	a	i	e	ɛ	ɔ	u

[6] In bi-morphemic nouns, like **mítʃ-gɔ̀d** 'bulbul', and other word classes, like the adjectival **gítʃɔ̂-b** 'big', back vowels do occur following front vowels.

a	kámáj ‘millet’	àríj ‘tree sp.’	gáísèn ‘chief’s podium’		ànzɔ́l ‘eagle sp.’	sàdúl ‘hair decoration’
i	hìjáf ‘heaven’	índìd ‘wife’	índèr ‘scorpion’	ʃíftɛ́r ‘boiling over (?)’		
e	ts’èèmár ‘black shapely woman’		hérèm ‘hump’			
ɛ	mèxán ‘lizard’	ɛ́ʃín ‘story’	bɛ́ltʃ’èm ‘embers’	ʃɛ́kɛ̀t ‘stool’		
ɔ	ɟɔ́màr ‘ginger’	sɔ̀líj ‘bee eater’	ɔ̀nkél ‘chest’		wɔ́ʃkwɔ̀ʃk ‘bird sp.’	tɔ́xùb ‘thick-billed raven’
u	t’ùláj ‘deaf’	búbìd ‘husband’	úúrèn ‘rat’	súsɛ̀t ‘bird sp.’	sùllɔ́k ‘hornbill sp.’	túhúm ‘spring’

1.5 Vocalic nasals and vowelless syllables

In a few words, nasals occur in the nucleus of the syllable, carrying tone.

6) èn̩g [ʔèn̩g^{h}] ‘land at intermediate altitude’
búúrn̩ [bú:rn̩] ~[bŭ:rn̯̆n] ‘whirlwind’
tʃ’írm̩tʃ’àrp’ [tʃ’írm̩̄tʃ’àrp’] ~ [tʃ’írəmtʃ’àrp’] ‘quail’

Some syllables have a very short vowel, like the alternative pronunciation [bŭ:rn̯̆n] in (6) above. Some noun or verb suffixes seem to have this very short vowel when following a consonant-final word. In whistled speech, these short vowels are present, but still they may not have their own tone. For example, the tone on the short vowel in the demonstrative in (7) is mid, which is due to its position between a L and H tone. The vowel on the definite suffix in (b) is probably best analysed as an epenthetic vowel.

7) a. ès-nú [ʔèsn̯̆nú^{h}] ‘this (M)’
b. érk-és [ʔírkn̯̆s] ‘the maternal uncle’

1.6 Diphthongs

Dime has words like those in (8) that can be analysed as having diphthongs in their first syllable. Besides an analysis as V_1V_2 sequence, it is also possible to argue for a VC sequence (i.e. a vowel followed by a glide consonant). Both long vowels and complex codas are already independently established in the language. Tonal behaviour so far does not give a clue either.

8)	dàìré ~ dàjré	'scar decoration pattern on torso'
	gáít ~ gájt	'hoe'
	fèìté ~ fèjté	'lowland'
	wɔ́íʃìl ~ wɔjʃìl	'tit (bird sp.)'
	ɔ́ís ~ ɔ́js	'butter'
	gùìdú ~ gùjdú	'baboon'
	ɟàùʃú ~ ɟàwʃú	'cross-eyed'

The nouns in example (9), which are monosyllabics ending with the diphthong, are perhaps better represented with two tone-bearing vowels instead of vowel-glide sequences. But probably these nouns are or were derived from bisyllabic ones.

9)	dáù ~ dâw	<? dáwù	/	<? dáʔù	'snake sp.'
	gáù ~ gâw	<? gáwù	/	<? gáʔù	'hookworm'

Bisyllabic nouns ending with -j[7] behave like consonant-final words (at least when affixing the plural marker **-af**). A sample list is given in (10).

10)	tʃ'ɔ́làj	'intestines'
	kámáj	'sorghum'
	kátsàj	'tapeworm'
	ʃɛ́j	'itch'
	àríj	'tree sp.'
	sɔ̀líj	'bee-eater'
	wúj	'stand'

[7] -j may be a relic of a nominative marker (cf. Ometo nouns suffixed by the nominative marker -í).

2. Consonants

Dime has 26 consonant phonemes[8].

Table 3. Consonants

	bilabial	alveolar	post-alveolar	velar	glottal
vd stop	b	d		g	
vl stop		t		k	ʔ
ej stop	p’	t’		k’	
ej affr		ts’	tʃ’		
vl affr		ts	tʃ		
vl fric	f	s	ʃ	x	h
vd fric		z			
vd affr			ɟ		
nas	m	n			
cont	w	l,r	j		

2.1 Consonantal inventory and allophones

All consonants are described below, with notes on their allophones and distribution.

2.1.1 Stops

/b/ is a voiced bilabial stop and may be weakened in intervocalic position. Before pause, it may be hardly audible (weakened and/or unreleased). In schema:

/b/ > [β] /V_V
[β̚] /_#
[b] /elsewhere

Example (11) lists some example words.

11) bázè ‘debt’
k’ɔ́bér ‘sycamore sp.’ [k’ɔ́βɔ́r]
wúsìb ‘bird sp.’ [wúsìβ̚]
úmbù ‘dukula’
rèbdé tree sp’, kubzu ‘fly’
dɛ́bbé ‘coriander’

[8] The number of consonant phonemes in the present analysis is considerably less than the 33 in Mulugeta (2008:9). The difference stems mainly from recognizing complementary distribution patterns, which reduces the number of phonemes.

/d/ is an voiced alveolar stop. Its release word-finally (before pause) is audible and (impressionistically) partially devoiced.

12) dɔ̀nú ‘potato’
kádé ‘grasshopper’
búúd ‘heart’
bándè ‘hair’
úddù ‘four’

/g/ is a voiced velar stop. Its release word-finally (before pause) is audible and partially devoiced.

13) gúrbú ábandoned house’
ʃúngù ‘lyre’
fug ‘finyit’
t’áng ‘velum’
tʃ’ìggé ‘to pay’

/t/ is a voiceless alveolar stop. It is slightly aspirated word-initially. Word-finally, there is an audible release.

14) tútú ‘owl sp.’
dùkít ‘civet cat’
kúʃtú ‘grease’
ínt ‘cockroach’

/k/ is a voiceless velar stop. It is slightly aspirated word-initially.

15) kùùkú ‘francolin’
ák ‘liver’
ʃánkè ‘floor’
wɔ́ʃkwɔ̀ʃk ‘crested eagle’
wɔ́kkèl ‘1’

/ʔ/ is a glottal stop. In initial position, it contrasts with /h/ and the glides (16). It is not written in word-initial position. In some verbs it occurs root-finally (17).

16) áfàl [ʔáɸà̰l] ‘cloth’ hálfè [ɦáɬɸə̀] ‘knife’

ɛ́hè	[ʔɛ́hə̀]	‘house’	jɛ̀ré	[jɛ̀ɾə́^{h}]	‘donkey’
ɔ́mmú	[ʔɔ́mːʊ́]	‘sun’	wɔ́mù	[wɔ́mù]	‘chaff from t’eff’

17) kɔʔ- ‘carry on the back’
ʃéʔ- ‘wash (clothes)’
tʃaʔ- ‘hit (with fist)’

/p’/ is a bilabial ejective, in free variation with the bilabial implosive (schematically written as /p’/ >[p’]~[ɓ]). It is relatively infrequent.

18) p’ɔ̀rtʃú ‘firefinch’ [p’ɔ̀rtʃú]~[ɓɔ̀rtʃú]
tááp’è ‘tongs’
k’ap’ ‘tongs’
k’ɔ́rp’ú ‘cattle sickness’

/t’/ is an alveolar ejective. In onset position, it is in free variation with its implosive counterpart.

19) t’élè ‘medicine’ [t’élə̀]~ [ɗélə̀]
kùt’ù’bú ‘vulture’
mét’ ‘snail’
gɔ́nt’ ‘to be angry’
fúlt’ù ‘ankle, wrist’

/k’/ is a velar ejective.

20) k’áhé ‘beads’
tʃààk’é ‘oath’
fɔk’ ‘to peel leaves off a maize cob’
lɔ́nk’ù ‘waterpipe’
bàkk’é ‘to press down (e.g. through a sieve)’

2.1.2 Affricates

/ts’/ is a voiceless alveolar affricative ejective.

21) ts’éts’è ‘gray hair’
kéts’ ‘hole for trapping animals’

	énts'é	'bee'

/tʃ'/ is a voiceless post-alveolar affricative ejective.

22)	tʃ'íítʃ'	'cloud'
	màtʃ'ár	'maize flower'
	p'ɔ̀rtʃ'ú	'firefinch'
	k'éntʃ'	'gland'

/ts/ is a voiceless alveolar affricate. It does not occur in word-initial position.

23)	étsé	'tooth'
	nééts	'child'
	dùntsú	'to labour in birth'

/tʃ/ is a voiceless post-alveolar affricate. It does not occur in word-initial position.

24)	tútʃù	'knot'
	batʃ	'year'
	kɔ́ftʃú	'lungs'
	géntʃ	'fig'

All the affricates are single phonemic units. Syllabification by native speakers shows that the affricates are treated as single segments: homorganic stop-fricative sequences are never divided over two syllables but always assigned to one syllable (25). Furthermore, word-initial syllable onsets only allow one consonant (ts'ɛ́ɛ́t 'hundred' is CVVC, not CCVVC).

25)	é.tsé	'tooth'
	gɔ́.ts'ù	'mosquito'
	mé.tʃè	'elder sister'
	mɔ̀ɔ̀.tʃ'ú	'spices'

2.1.3 Fricatives

/f/ is a voiceless bilabial or labiodental fricative. In most positions, it is weakened to a soft bilabial with little friction [ɸ]. Following a nasal, it is strengthened to become a stop word-medially, or affricate word-finally. Schematically:

/f/ > [p] /N_

[pɸ]/N_#

[ɸ] ~ [f] /elsewhere

26) fúfúm ‘yoghurt’
shíf ‘shade (of tree)’
dámf ‘tobacco’ [dámpɸ]
kàlfé ‘shoulder’
kɔ́ftʃú ‘lung’
gɔ́ft ‘joy’

/s/ is a voiceless alveolar fricative.

27) súsɛ̀t ‘bird sp. (waxbill?)’
tɔ́s ‘story’
kúst ‘roof’
gàrsé ‘louse’
mánsé ‘weed’
háxstè ‘evening’
méslá ‘marriage name for a large woman’
sústú ‘rust’
tɛ́ssé ‘waterfall’

/ʃ/ is a voiceless post-alveolar fricative.

28) ʃɛ̀lé ‘clay dish for serving food’
úʃùm ‘horn’
gáʃ ‘road’
girsh ‘porcupine’
wɔ́ʃkwɔ̀ʃk ‘crested eagle’
kárʃe ‘tigh’
áxʃè ‘clay’
ɔ̀ʃlá ‘marriage name for a light-skinned chubby woman’
kúʃtú ‘fat, grease’

/x/ is a voiceless (post-)velar fricative. It does not occur word-initially. Intervocally it will become voiced, and also following /r/ or preceding a voiced or ejective (unvoiced)

consonant. Speakers differ a bit in how far back they produce these fricatives so that there is phonetic variation: x ~χ and ɣ ~ʁ. The simplest schema to describe the distribution of the allophones is that the voiceless allophones occur before voiceless consonants and before pause and the voiced allophone elsewhere:

	ɣ	> x~χ	/_C[vl]
			/_#
		> ɣ ~ʁ	elsewhere

29)	áxèm	‘ensete’ [áɣə̀m] ~[áʁə̀m]
	bááx	‘13th month’ [báːx]~ [báːχ]
	búxxú	‘big gathering, crowd’
	báxtʃér	‘monitor lizard’
	fúxt’ù	‘straw’
	màxsé	‘blood’
	báxzém	‘cold’
	ɛ́rxɛ̀n	‘sweat’

/h/ is a glottal fricative. Word-initially it is voiced [ɦ] and does not occur in front of back vowels (30). Word-medially and finally it is voiceless (31). Schematically:

	/h/	> ɦ/#_
		> h elsewhere
30)	hááxé	‘tree’ [ɦáːʁɘ́]
	hédèr	‘left hand’
	híngé	‘insect sp.’
31)	mɛh	‘money’
	kíràh	‘flamingo’
	ɛ́hè	‘house’ [ʔɛ́hə̀]
	gáhè	‘sunny season’
	wɔ̀hú	‘meat’

/z/ is a voiced alveolar fricative.

32)	zɛ́rè	‘body’
	díízè	‘highland’

	k’éz	‘trap’
	ámzè	‘woman’

/ɟ/ is the post-alveolar counterpart of /z/. Word-initially it is pronounced as an affricate, whereas intervocally it is pronounced as a fricative. Word-finally it may be pronounced both [dʒ] and [ʒ].

33)	ɟéré	‘ravine’
	ɟààɟé	‘Melo’ [dʒà:ʒɔ́]
	bárɟe	‘grain sp.’
	fúúɟ	‘cold, cough’
	gérɟ	‘cat’

2.1.4 Nasals

/m/ is a bilabial nasal.

34)	máálé	‘coffee dregs’
	ʃúkúmú	‘hoof’
	úm	‘arrow’
	k’ùmdú	‘skin’
	gúmt’ù	‘lightning’
	bendemt’	‘creation’
	támmé	‘10’

/n/ is an alveolar nasal. It assimilates in place to post-alveolar and velar consonants. There is no evidence for /ŋ/ in my data, since all occurrences of [ŋ] are adjacent to a velar.

35)	núnú	‘fire’
	àján	‘spirit’
	bíndè	‘ash’
	béngè	‘spear’ [bɔ́ŋgɔ̀]
	géntʃ’	‘fig’ [gɛ́ɲtʃ’]
	ànzɔ́l	‘eagle sp.’
	ʃénné	‘five’

Note that not all nasals are harmonized in place!

36) k’émdè ‘eyebrow’
ámzè ‘woman’

2.1.5 Approximants and others

/w/ is a labio-velar approximant. In word-initial position, it only occurs preceding back vowels. It is rare in other positions.

37) wɔ́mù ‘chaff from t’eff’
wúlù ‘neighbour’
ɟàwʃú ‘cross-eyed’

/j/ is a post-alveolar or palatal approximant. In word-initial position, it is in complementary distribution with /w/, not occurring before back vowels.

38) jífè ‘eyelashes’
jɛ̀ré ‘donkey’
já ‘you’
máájé ‘water pot’
gɔ̀jú ‘butt’
k’ááj ‘fog’

/r/ is an alveolar tap or trill. In a few nouns it occurs word-initially, which is rare in Omotic.

39) rèbdé ‘tree sp.’
kérèm ‘fence’
ʃɔ́r ‘trumpet-like instrument’
tʃ’ɛ́rkè ‘dew’
k’úrʃù ‘viper’

/l/ is an apico-alveolar lateral.

40) láálè ‘stone’
sɔ́ɔ́l ‘injera’
mɛ́llé ‘milling stone’
gúlts’ú ‘tadpole’
ɔ̀ʃlá ‘marriage name for a chubby, fair skinned woman’

2.2 Consonant gemination

Gemination of consonants is phonemic in Dime. Example (41) shows some (near) minimal pairs. Gemination is so far attested for b, d, g, k, k', s, ch, gh, m, n and l. It is expected that further research will fill some of the gaps.

41)	báálè	market	bàállé	'forked pole'
	sìlé	'personal item from childhood'	síllé	'barren man'
	émé	'insect sp.'	émmé	'give/giving'
	túmú	'lake'	tùmmú	'colon (large intestine)'

2.3 Sibilant harmony

Root-internally, sibilants must be either alveolar, or post-alveolar; they cannot be mixed.

42)	alveolar:		post-alveolar:	
	ts'íz	'ash in waterpipe'	tʃ'áájè	'ground squirrel'
	sútsú	'refined ore'	tʃ'éʃém	'flower'
	ts'étsè	'right arm'	tʃ'íítʃ'	'cloud'
	súsɛ̀t	'waxbill (?)'	ɟààɟé	'Melo'
	sésàj	'indigobird'	ɟéʃè	'milk'
			ʃéntʃ	'bed'

Across morpheme boundaries, the causative suffix **-s** harmonises in place (43) but the definiteness marker **-(é)s** does not (44).

43)	sɛ̀lx-s-é	'smell something good' (cf. sɛ́lxèn 'fragrance')
	ʃùx-ʃ-ú	'smell something bad'
	wùtʃ-ʃ-ú	'water (make drink)'
44)	nééts-és	'the child'
	ʃéntʃ-és	'the bed'

3. Phonotactics

This section briefly discusses syllable structure and consonant clusters.

3.1 Syllable types

Dime has six syllable types, exemplified below.

45)	CV	nú	‘he’	zɔ́.lù	‘bird of prey’
	CVV	kàà.ʃé	‘cheek’		
	CVC	t’ɛ́l	‘flour’	à.ján	‘spirit’
	CVVC	dɔ́ɔ́m	‘heel’		
	CVCC	gɔ́ft	‘joy’	má.lént’	‘soot (on pots)’
	CCV	háx.stè	‘evening’		

N.B. Glottal stops are not written word-initially.

3.2 Consonant clusters

Most clusters in monomorphemic words have a nasal or liquid as C1 and an obstruent as C2. A few examples are given in (46). C1 can also be filled by fricatives (esp. **f** and **x**) and C2 is then **t** or an (af)fricative (47).

46)	bángèl	‘jawbone’
	fíndèr	‘scorpion’
	ámzè	‘woman’
	kéntʃé	‘clay tobacco holder on water pipe’
	érk	‘maternal uncle’
	wɔ̀rʃín	‘skirt from leaves’
	bàltʃé	‘stiff porridge’
	tɔ́lkú	‘leopard’

47)	éfté	‘bird’
	wɔ́fʃél	‘coffee husks’
	ɔ́xʃú	‘cardamom’
	ʃɛ̀xtʃé	‘bird sp.’
	ʃɔ́ɔ́lɔ́xt	‘martin/swallow’

There are a few nouns with other clusters, like rèbdé ‘tree sp.’

4. Notes on tone

Research on tone is in its early stages. No full analysis is attempted here.

Tone is easier to identify for the speakers than for example vowel length, showing that tone is an important part of the word and a major clue for identifying words. In fact, given a proper context, tone may be the only clue: the speakers of the language sometimes communicate by whistling alone.

4.1 Tone on nouns

Dime has two tones, H and L. A HL falling tone also occurs, but so far there is no compelling evidence to regard it as a unit rather than a compound tone.

All monosyllabic nouns are H. In disyllabic nouns, three tone patterns occur.

48) H.H kámé 'wooden trough'
H.L kánè 'younger sibling'
L.H kìtʃ'é 'thatch'

All voiced consonants (both obstruents and sonorants) in a syllable onset cause H tones to start slightly lower, so that H may sound like a rising tone (tonetic variation). In (49), two nouns with a H.L tone pattern are compared. The first noun starts with a voiced consonant, the second with a voiceless consonant.

49) [˜ ˋ] [¯ ˋ]

záátè 'bean'

tááp'è 'tongs'

Tone does not appear to have any relationship with syllable structure. Table 4 illustrates all three tone patterns in disyllabic words with common CV-structures.

Table 4. Tone patterns and syllable structure

	H.L	H.H	L.H
CV.CV	mátè 'face'	kádé 'grasshopper'	bàjé 'food'
CVV.CV	náájè 'hyena'	hááxé 'tree'	àànè 'hand'
CVC.CV	hálfè 'knife'	mángé 'gourd'	bàlté 'forehead'
CVC.CVC	bángèl	báxtʃér	ɔ̀nkél

	‘jaw/molar’	‘monitor lizard’	‘chest’
CV.CVC	áxèm ‘ensete’	báʃém ‘fear’	sɛ̀lɛ́l ‘palm tree sp.’

When the plural marker **-af** is suffixed, the terminal vowel of a noun is dropped, and the tone remains the same.

50)	H.H	ts’áámé	ts’áám-áf	‘eagle(s)’
	H.L	kɔ́ɔ́lù	kɔ́ɔ́l-àf	‘dove(s)’
	L.H	kùùkú	kùùk-áf	‘francolin(s)’

With C-final words, the tone patterns become as follows:

51)	H.H	báxtʃér	H.H.H	báxtʃér-áf	‘falcon(s)’
	H.L	gúdùm	H.H.L	gúdúm-àf	‘wild boar(s)’
	L.H	bùkúk	L.H.H	bùkúk-âf ~ bùkŭk-áf	‘parrot(s)’

The tonal behaviour is the same when the definiteness marker **-(e)s** is suffixed.

4.2 Tone on verbs

In the verb paradigms in (52), note the distinctive way of marking person, with a suffix **-t** for 1st person and a suffix **-n** for 2nd and 3rd person. The verb root is **ets** ‘eat’. The paradigm to the left marked with **-tɛ** could be Imperfective, while the paradigm to the rightmarked with -**e** could be Perfective.

52)	áté	éstêt	‘I eat’	áté	étsêt	‘I ate’
	yá	éstên	‘you eat’	yá	étsên	‘you ate’
	nú	éstên	‘he eats’	nú	étsên	‘he ate’
	ná	éstên	‘she eats’	ná	étsên	‘she ate’
	wótè	éstêt	‘we eat’	wótè	étsêt	‘we ate’
	yésè	éstên	‘you (pl.) eat’	yésè	étsên	‘you (pl.) ate’
	kɛ́tè	éstên	‘they eat’	kɛ́tè	étsên	‘they ate’

The little elicitation on verbs that was done so far shows only two verb classes. So far, the distinction only shows up on the root in the Imperative. The verbs on the left in (53) have a

L tone on the two Imperative forms and the verbs on the right a H tone. All verbs have the same tone pattern on the other two forms of the quadruplets.

53)

L roots		H roots	
sàhé	‘stroke!’	áfé	‘dry!’ (put something in the sun)
sàhés	‘stroke (pl.)!’	áfés	‘dry (pl)’
sáhêt	‘I/we stroked’	áfêt	‘I/we dried’
sáhtɛ̂t	‘I/we stroke’	áftɛ̂t	‘I/we dry’
hàtsé	‘sift!’	tʃ’á?é	‘hit!’ (with fist)
hàtsés	‘sift (pl)!’	tʃ’á?és	‘hit (pl)!’
hátsêt	‘I/we sifted’	tʃ’á?êt	‘I/we (have) hit’
hástɛ̂t	‘I/we sift’	tʃ’ádɛ̂t	‘I/we hit’
bàkk’é	‘press down!’ (through a sieve)		
bàkk’és	‘press down (pl)!’		
bákk’êt	‘I/we pressed down’		
bák’dɛ̂t	‘I/we press down’		

5. Writing consistently

This section presents some suggestions for writing the language consistently. Ideally, each distinctive sound of the language is represented in a unique way, so that there can be no confusion about the meaning of words and so that the written form of the language is just as expressive as the spoken form. Writing in a uniform and regular manner makes it easier to read and to search text for a certain word.

5.1 Fidel

This section describes how to write Dime using fidel. Glosses are given in Amharic, so that the examples will be accessible to those who don’t know English well.

5.1.1 Consonants

The following table shows how the consonant phonemes of the language are mapped to fidels:

	bilabial	alveolar	post-alveolar	velar	glottal
vd stop	b ቡ	d ድ		g ግ	

vl stop		t ት		k ከ	ʔ አ
ej stop	p’ ጵ	t’ ጥ		k’ ቅ	
ej affr		ts’ ጽ	tʃ’ ጭ		
vl affr		ts ፘ	tʃ ች		
vl fric	f ፍ	s ስ	ʃ ሽ	x ኾ	h ኽ /#_ ሀ
vd fric		z ዝ			
vd affr			ʒ ጅ		
nas	m ም	n ን			
	w ው	l,r ል፥ ር	j ይ		

While most fidels are similar to the standard Amharic use, some are different.

In Dime, ስ /s/ and ፘ /ts/ are two different sounds. Note that ፘ does not occur at the beginning of a word.

54) **ሳጌ ‘መቄረጥ’ አሡ ‘ስማግሌ’**
ሳሄ ‘መዳሰስ’ ኤሜ ‘ጥርስ’
ሳሜ ‘ሾላ ዛፍ አይነት’ ጌፍሜ ‘ዳቦ’
ሴኬ ‘የሌሊት ወፍ’ ካሜ ‘ትል’
ሰለል ‘ዘንባባ’ ዬሥ ‘ድግምት’
ሲል ‘2ኛ ማሽላ’ ቤሜ ‘ላከ’
ሶንቁ ‘ሳመ’ ዱንሡ ‘ማማጥ’
ዲሴን ‘ፈጨ’ ኔዕሥ ‘ልጅ’
ጉሱ ‘ትልቅ ቅል’ ጦይሥ ‘መውቀር’
ቶስ ‘ታሪክ’ ጼሜ ‘ቀኝ ኢጅ’
ቃስቴን ‘ሁለት’ ቃሥ ‘ተከታተለ’
ሱስቱ ‘ዝጋት’ ሱሡ ‘በእሳት የጣራ በረት’

Use ጽ, as in the following words. Don’t use ፅ when you write Dime.

55) **ጼጼ ‘ሽበት’**
ጻልቴ ‘ጤናደም’
ጻኑብ ‘ጥቁር’
ጸዕት ‘መቶ’
ኤንጼ ‘ንብ’
ለጼ ‘ላሰ’
ቃርጼ ‘ቁርጠት’
ጎጹ ‘የዎባ ትንኝ’
ጼሜ ‘ቀኝ ኢጅ’

For the phonemic sound /h/, there are two fidels in Dime. [ɦ]: in the beginning of the word, use ኸ (and wherever this allophonic sound occurs root-initially). [h]: In the middle and at the end of the word use ሀ. Don't use ሐ and ኀ.

56) ኻልፌ ‘ቢላዋ’
ኼሬም ‘ሸኛ’
ኻዕቼ ‘ዛፍ’
ኻዕኬ ‘ከመሬት ለከመ’
ኻሚ ‘ማወናፍት’
ኻቾስቴ ‘ማታ’

57) ቱሁም ‘ምንጭ’
መህ ‘ገንዘብ’
ላህ ‘ስድስት’
ዎሁ ‘ስጋ’
ጋሄ ‘በልግ’
ኧሄ ‘ቤት’

Dime has a sound/x/ that is not present in Amharic. Use ቾ for all its occurrences.

58) ኣቼም ‘እንሰት’ ኣቾሼ ‘ሸክላ’
ቦቼሉ ‘በቀለ’ ጨርቾንጥ ‘አረንጓዴ’
ደቼ ‘በቆሎ መዝራት’ ጋቼም ‘ነገ’
ሎቾቼ ‘ፍትፍት’ ማቾሴ ‘ደም’
ሾቼር ‘የጋያ መቀመጫ’ ናቾት ‘እንክልፍ’
ናዕቼ ‘ትላንት’ ባዕቾ ‘ጓጉሜ’
ዎቼን ‘ከብት’ ዛቼም ‘ኤሊ’
ዙቼ ‘ዎባ’ ኻዕቼ ‘እንጨት’
ሙዕቼ ‘መቆጨት’

Consonant gemination is so far not written, but could be written with two dots over or under the fidel, as is often done in Amharic for foreigners.

5.1.2 Vowels

The first form is used for the sound /ɛ/. Listen as you speak out the words.

59) በሼ ‘ምጣድ’ ጨርኬ ‘ጤዛ’
በት ‘ኰባለለ’ መህ ‘ገንዘብ’
መቴ ‘ችገር’ መልቼ ‘ምንጠሮ’
ሰለል ‘ዘንባባ’ ሸሜ ‘ጸሎት’
ሸገት ‘ጭልፌት’ ቀርሴ ‘መናቅ’
ቀዕሬ ‘ቅዳሜ’ ዘሬ ‘ሰውነት፥ አካል’
የዬ ‘ተኩላ’ ጠዕሼ ‘ጥላ’

ጠል ‘ዱቄት’ ገርጅ ‘ድመት’

If this sound /ɛ/ is at the very beginning of the word, it is spelt with ኧ.

60) ኧሄ ‘ቤት’ ኧርቐን ‘ላብ’
ኧሺን ‘ተረት’ ኧዕቴም ‘ቁስል’

The second form is used for the sound /u/.

61) ሹንጉ ‘ክራር’ ሹኩሙ ‘ሰኰና’
ሹጤር ‘ንስር’ ቁርሹ ‘እፍኝት’
ቡዕድ ‘ልብ’ ሙዕጹ ‘መልምል’
ኩብዙ ‘ዝምብ’ ኩዕኩ ‘ደፋርሳ’
ዱዕሩ ‘ዝሆን’ ጉሽ ‘ጥፍር’
ፉጉ ‘ማካፈል’ ኣሡ ‘ሽማግሌ’

The third form is used for the sound /i/.

62) ሲቢብ ‘አማች’ ሲዕኔ ‘ወፍጮ ድንጋይ’
ሺፍ ‘የዛፍ ጥላ’ ሺኬ ‘ጠፍ በእጅ መንከል’
ኢሺም ‘ታላቅ ወንድም’ ቲንጌ ‘ሄደ’
ኢንት ‘በረሮ’ ኢዕኔ ‘በግ’
ኢንዲድ ‘ምስት’ ቢንዬ ‘አመድ’
ኪንጌ ‘ሸራራት’ ዩንጌ ‘አየ’
ዩዬ ‘ያዘ’ ዩዕሌ ‘አፈር’
ጊቾብ ‘ከባድ’ ጢዩን ‘መግል’
ማሊንጥ ‘ጥላሸት’ ቡቢድ ‘ባል’
ኩሊም ‘በቆሎ ለአበባ ደረሰ’ ዎሊይ ‘አጋዝን’

The fourth form is used for the sound /a/. Note that always the fourth form is used. At the start of a word, use ኣ. Don’t use ኣ.

63) ላህ ‘ስድስት’ ማንጌ ‘ቅል’
ላዕካይ ‘የበቆሎ ጸጉር’ ማጫር ‘የበቆሎ አበባ’
ሻጩም ‘ብራቢሮ’ ሻክ ‘በርሃን’
ቃዕሜ ‘ጆሮ’ ባልቼ ‘ንፍሮ’
ባዕቴ ‘ጎደሬ’ ታቼ ‘ታኮ’
ኣቴ ‘እኔ’ ኣክ ‘ጮጮራ’
ኣፉል ‘ልብስ’ ካልት ‘መጥረቢያ’
ኻዕች ‘ካረዛ’ ጣቼ ‘ማጭድ’

The fifth form is used for the sound /e/. Have you heard the difference with the first and third form?

64) ሜቼ ‘ታላቅ እህት’ ሜል ‘ስራስር’

ሜዙ	‘ስም’	**ሜዕኬ**	‘ጎሽ’
ሴኬ	‘የሌሊት ወፍ’	**ሴዬ**	‘መዳን’
ሼኡ	‘ልብስን ማጠብ’	**ሼዕሬ**	‘ሚስጥ’
ቄምዲ	‘ቅንድብ’	**ቄንጭ**	‘እጢ’
ቄዕሬ	‘በር’	**ቤርጌ**	‘ክረምት’
ቤንጌ	‘ጦር’	**ቴቼ**	‘ማረድ’
ኤሜ	‘መብላት’	**ኤል**	‘አድስ ቅጠል’
ኤርክ	‘የእናት ወንድም’	**ኤርፌ**	‘ጨረቃ’
ኤፍቴ	‘ወፍ’	**ኤዕል**	‘ጥንቸል’
ኤዕቴ	‘ጉሎ’	**ዜዕቴ**	‘በሬ’
ጌዕሽ	‘ካርካሮ’	**ጤሌ**	‘መድኃኒት’

The seventh form is used for the sound /ɔ/~/o/.

65) **ሎክ** ‘ነገር’ **ሾር** ‘መልኬት’
ቶስ ‘ታሪክ’ **ፎቅ** ‘መሸልቀቅ’
ጎፌር ‘እንሽላሊት’ **ቶልኩ** ‘ጂብ’
ሎንቁ ‘ጋያ’ **ኦዕቱ** ‘ላም’
ኦጭ ‘ፍልፈል’ **ሾላይ** ‘ትኩስ ወተት’
ሶዕል ‘እንጀራ’ **ዶዕም** ‘ተረከዝ’

Because of the complex syllable structure, it seems wise to reserve the sixth form fidels for consonant-only use. Compare the words on the left with the words on the right and note which sound you heard at the end of the word.

consonant-final			vowel-final		
CVC	**ባች**	‘year’ [bátʃ]	CV.CV	**ባቼ**	‘cattle fence’ [bàtʃɔ́]
	ሲል	‘2nd growth of grain’ [síl]		**ሲሌ**	‘personal item from childhood’ [sìlɔ́]
CVVC	**ኤዕክ**	‘grandfather’ [é:k]	CVV.CV	**ኤዕኬ**	‘locust’ [é:kɔ́]
	ትዕር	‘fog’ [tí:r]		**ቲዕሬ**	‘floor mat’ [tì:rɔ́]
CVCC	**ካልት**	‘axe’ [kálɪt]	CVC.CV	**ባልቴ**	‘forehead’[bàltɔ́]
	ጌንች	‘fig’ [gɔ́ɲtʃ]		**ጩንቼ**	‘mediator’ [tʃ’ɔ̀ɲtʃɔ́]

N.B.: Further research needs to determine whether to write certain suffixes with fifth form or sixth form.

Vowel length: **ዕ** is an unchanging symbol indicating that the vowel is lengthened. This solution is used in Zayse and has been adopted during the workshop[9].

		example with short vowel		example with long vowel	
i	ኢ (3rd form)	ይ<u>ሥ</u>	jíts 'charm'	<u>ዲዕ</u>በ	dííbé 'thief'
e	ኤ (5th form)	<u>ሜሸ</u>	mèʃé 'sowing'	<u>ሜዕ</u>ሸ	mèèʃé 'satan'
ɛ	ኧ (1st form)	<u>ኧሄ</u>	ɛhe 'house'	<u>ጻዕ</u>ት	ts'ɛ́ɛ́t 'hundred'
a	ኣ (4th form)	ባዬ	bàjé 'food'	<u>ባዕ</u>ዬ	báájè (wilderness)
ɔ	ኦ (7th form)	ጎሩ	gɔ̀rú 'grave'	<u>ጎዕ</u>ሩ	gɔ́ɔ́rù 'heap of stones'
u	ኡ (2nd form)	<u>ዙሉ</u>	zùlú 'rainbow'	<u>ዙዕ</u>ሉ	zúúlù 'shinbone'
C only	(6th form)	ዳ<u>ልቕስ</u>ቴ	dàlxsté 'ointment for blessing'		
		ቤ<u>ን</u>ደ<u>ም</u>ጥ	béndémt' 'creation'		

Here are some more words with long vowels:

66) ኢዕኔ 'በግ' ቲዕር 'ጉም'
ዲዕዘ 'ደጋ' ጢዕሜ 'ትዕቢት'
ሱዕቱ 'ለሊት' ቱዕም 'ነጭ ሽንኩርት'
ቱዕሱ 'ዘመድ' ኡዕሬን 'አይጥ'
ላዕሌ 'ድንጋይ' ማዕዬ 'እንሰራ'
ቃዕሬ 'ጦጣ' ሻዕዬ 'አሻዋ'
ማዕሌም 'መስኬን' ባዕሌም 'እውር'
ባዕቕ 'ጳጉሜ' ናዕቔ 'ትላንት'
ኣዕኔ 'እጅ' ጃዕጂ 'መሎ'
ጻዕፌ 'መላጥ' ፋዕዚን 'ጥርስ ፍንጭት'
ጫዕቂ 'ማላ' ባዕቴ 'ጎደሬ'
ባዕኬ 'ጉልቻ' ኣዕክ 'ሴት አያት'
ቃዕሜ 'ጆሮ' ዛዕቴ 'አደንጓሬ'

[9] Alternative solutions are possible, for example using the appropriate fidel for [ɦ], for example ዲሸበ 'thief'; ሜሸሼ 'satan'; ጸሸት 'hundred'; ዙሹሉ 'shinbone'.

If, in the future, it should be necessary to add a 7th vowel, i.e. distinguish three back vowels, I recommend introducing the 'ɔ'-forms developed for Me'en and Suri (for example ሎ, ሟ, ሶ, ቦ, ቃ, ጦ, ኡ, ሾ). Then, ቆስ would be pronounced [k'ós] 'bone, አጥንት' and ሎክ would be pronounced [lɔk] 'thing, ነገር' . SIL can help installing the keyboarding program needed to type these forms[10].

5.1.3 Tone

Tone is usually not written in fidel, though it is possible to use accents over the fidel symbols, or put a single dot under them. More research is needed to decide whether to write tone, and if yes, how. To my knowledge, no research has ever been done to test the relative worth of writing tone vis-a-vis writing consonant gemination or vowel length for ease of word recognition and reading in fidel. Therefore, no good grounds for an advice on this point can be offered.

5.1.4 Alphabet chart

The table below shows a possible alphabet chart for Dime.

	Cɛ	Cu	Ci	Ca	Ce	Cɔ	C[11]
l	ለ	ሉ	ሊ	ላ	ሌ	ሎ	ል
m	መ	ሙ	ሚ	ማ	ሜ	ሞ	ም
ts	ሠ	ሡ	ሢ	ሣ	ሤ	ሦ	ሥ
r	ረ	ሩ	ሪ	ራ	ሬ	ሮ	ር
s	ሰ	ሱ	ሲ	ሳ	ሴ	ሶ	ስ
ʃ	ሸ	ሹ	ሺ	ሻ	ሼ	ሾ	ሽ
k'	ቀ	ቁ	ቂ	ቃ	ቄ	ቆ	ቅ
x[12]	ቐ	ቑ	ቒ	ቓ	ቔ	ቖ	ቕ
b	በ	ቡ	ቢ	ባ	ቤ	ቦ	ብ
t	ተ	ቱ	ቲ	ታ	ቴ	ቶ	ት
tʃ[13]	ቸ	ቹ	ቺ	ቻ	ቼ	ቾ	ች

[10] An alternative solution would be using the 'wa' forms, which do not request special keyboards, but these are probably less intuitive and require more adaptation when transitioning to Amharic.

[11] Care should be taken NOT to append a vowel, as is done in Amharic. Therefore the *'sadis'* column is here placed last! It remains to be seen whether that is acceptable to the Dime people, and how it would influence children's transition to Amharic in case they start learning in their mother tongue.

[12] This consonant does not occur word-initially. It might be necessary to prefix a vowel.

n	ነ	ኑ	ኒ	ና	ኔ	ኖ	ን
ʔ	ኧ	ኡ	ኢ	ኣ	ኤ	ኦ	
k	ከ	ኩ	ኪ	ካ	ኬ	ኮ	ክ
ɦ	ኸ	ኹ	ኺ	ኻ	ኼ	ኾ	
h[14]	ሀ	ሁ	ሂ	ሃ	ሄ	ሆ	ህ
w	ወ	ዉ	ዊ	ዋ	ዌ	ዎ	ው
z	ዘ	ዙ	ዚ	ዛ	ዜ	ዞ	ዝ
j	የ	ዩ	ዪ	ያ	ዬ	ዮ	ይ
d	ደ	ዱ	ዲ	ዳ	ዴ	ዶ	ድ
ɟ	ጀ	ጁ	ጂ	ጃ	ጄ	ጆ	ጅ
g	ገ	ጉ	ጊ	ጋ	ጌ	ጎ	ግ
t’	ጠ	ጡ	ጢ	ጣ	ጤ	ጦ	ጥ
tʃ’	ጨ	ጩ	ጪ	ጫ	ጬ	ጮ	ጭ
p’	ጰ	ጱ	ጲ	ጳ	ጴ	ጶ	ጵ
ts’	ጸ	ጹ	ጺ	ጻ	ጼ	ጾ	ጽ
f	ፈ	ፉ	ፊ	ፋ	ፌ	ፎ	ፍ

5.2 Latin

An alphabet in Latin script could look like the following (IPA values given underneath):

a b c ch d e ɛ f g gh h i j k l m n o p q r s sh t ts u w x xs y z

a b tʃ’ tʃ d e ɛ ɸ g x h i dʒ k l m n ɔ p’ k’ r s ʃ t ts u w t’ ts’ j z

In Latin, long vowels will be written by doubling the vowel grapheme, and geminated consonants by doubling the consonant grapheme, or the first symbol of the digraph. Tone can be written by accents. Sample words can be found in the attached word list.

[13] This consonant does not occur word-initially. It might be necessary to prefix a vowel.

[14] A voiceless **h** does not occur word-initially. It might be necessary to prefix a vowel. Because of this difference/difficulty, this consonant is not put in its common row as the first fidel, but here.