

Making light weight of

# SAMAR

A Rounded Devanagari Font





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Project 1 - Internship at Ek type  
May - June 2016

Ashish Kumar  
156250004  
M. Des 2016 -2017  
Communication Design  
IDC, School of Design, IIT Bombay



# Declaration

I hereby declare that this written Submission represent my idea/work in my own words and none of the Ideas borrowed or copied without due acknowledgment. I adequately mentioned and referenced the original sources. Moreover I also declare that it does not contain substantial proportion of material which I have been accepted for the award of any degree or diploma of any educational institution. I have adhered to all principles of academic honesty and integrity and have not misrepresented or falsified any idea, data, facts, source in my submission.

Signature:

Date:

Ashish Kumar  
156250004  
IDC, School of Design  
IIT Bombay

# Acknowledgment

I would like to express my heartily gratefulness to those who have been a part of my design journey at EK TYPE.

**EK TYPE**, to give me an opportunity to work with them and be a part of their ongoing project.

**Prof. Girish Dalvi**, to give encouragement and guidance to do my project-1 in type design.

**Nupur Datye**, for aiding me in my learning and understanding of the font design and to give her valuable feedback on my work.

**Mr. Sarang Kulkarni**, for sharing his experience and deep knowledge in type design.

**Shuchita Grover**, for teaching me font lab software and giving me her valuable time to complete my project.

**Adarsh**, for sharing his 'Ek Tamil' experience and project report.

A heartfelt note of thanks to the rest of the **Ek type Team– Maithili Shingre, Shulekha, Omkar** who have contributed in my journey.

IDC, and all the faculty, for cultivating a holistic design sensibility within.

& My parents and my friends.

# Completion Letter

EK TYPE



.....  
www.ektype.in

COMPLETION LETTER

10 June 2016

To whomsoever it may concern,

This is to certify that Mr. Ashish Kumar from IDC, IIT, Mumbai has successfully completed his internship at Ek Type. The Duration of his internship was 1 month from 2nd May to 31st May 2016.

During his internship, Ashish worked on an ongoing typeface in Devanagari script. He worked on deriving the regular weight and refining and spacing of characters.

Ashish is sincere and enthusiastic. We wish him all the best for his future endeavour.

Yours Sincerely  
Sarang Kulkarni  
Co-founder - Ek Type

+91 9820 347 788

.....  
info@ektype.in | www.ektype.in | Ek Type: 501, Crystal Paradise, Off Veera Desai Road, Andheri (W), Mumbai 400053





# **Contents**

**Abstract 9**

**Preface 10**

**About Ek Type 11**

**What is Samar 12**

**Study of existing weight of Samar 14**

**Ek Mukta Study 16**

**Determining Stroke widths 17**

**Reducing weight 18**

**Comparison with regular and bold 19**

**Basic character set 20**

**Spacing 22**

**Basic of AFDKO 28**

**Conclusion 29**



# Abstract

‘Ek’ is synonymous to ‘one’ in several Indian languages, and EK TYPE is a collaborative platform in India under ‘one’ roof to develop fonts. As a part of my internship program, I had a great opportunity to work with them on their ongoing project ‘Samar Devanagari Rounded.

This report describes my experience and work process and my understanding towards the detail and methodology to develop a font.

I have presented my work in the form of the design process which includes pre study, designing, analyzing, testing, refining. It shows my role and involvement in the development, and how I came up with a suitable design solution

**Type design is about function,  
drawing pretty shapes is not  
enough.**

—James Tod

## Preface

Type design is a process which involves a spacious amount of minute refinement of every small detail. From scratch to end design it needs a good understanding of form, space, balance and a tremendous patience.

Making a lighter version of existing weight of a font is much easier than making a fresh font because we have pre-defined visual grammar and knots, we just have to follow the grammar of existing. But it is a good start for me to learn font design. I would like to take you through the visual journey of thing that I have learned in the process of making a lighter version of Samar Devanagari at EK TYPE.



## About EK TYPE

Ek Type is a collaborative type design studio based in India that specializes in developing fonts across all Indian languages, many of which are multi-script. Giving adequate importance to script grammar and script tradition, it produces standardized fonts in multiple weights, supporting multiple software platforms for a wide range of applications

Ek Type comprises of experienced type designers, researchers and academicians spanning a wide age group whose varied skill sets complement each other. Apart from developing and selling fonts, Ek Type creates documentations and awareness about Indian typography. In addition to this, it mentors upcoming type designers by engaging them in the process of font development and subsequently provides them with a platform to showcase their work.

In several Indian languages, 'Ek' is synonymous to 'one'. 'Ek' type thus exemplifies what it stands for by serving as an open, collaborative platform under 'one' roof to develop and sell fonts, inviting others to be a part of it.

## What is Samar?

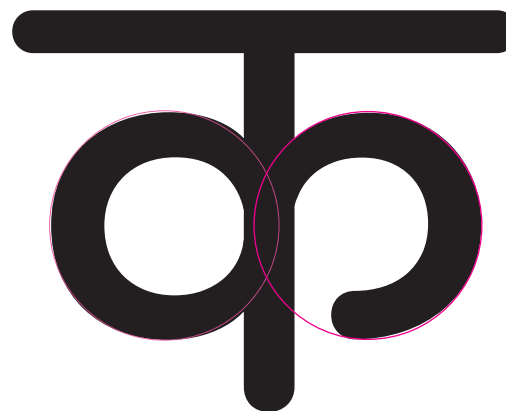
Samar is a Rounded Devanagari font designed by Divya Kowshik in Ek Type. The Idea behind the font was that there are so many Latin rounded fonts used for branding and other common uses. Basically rounded font is quite popular in use, but when it was designed there was no good Devanagari rounded font family. So she decided to take up this as a project and tried to make a font with neutral and rounded in nature.

## Basic Glyphs

अ आ इ ई उ ऊ ए ऐ ओ औ  
क ख ग घ ङ च छ ज झ ञ ट  
ठ ड ढ ण त थ द ध न प फ ब  
भ म य र ल व श ष स ह क्ष त्र  
ज्ञ ० १ २ ३ ४ ५ ६ ७ ८ ९ ५ ८

## Study of existing weight of Samar

On my first day in 'Ek type' I had supposed to do study of existing weight of Samar Devanagari to understand its nature and visual grammar and how it looks in the text. So I have printed root letters and started imitating and tracing to analyze them, and came up with an understanding of their visual features which were the crucial thing to make a lighter version out of existing weight of Samar Devanagari font.

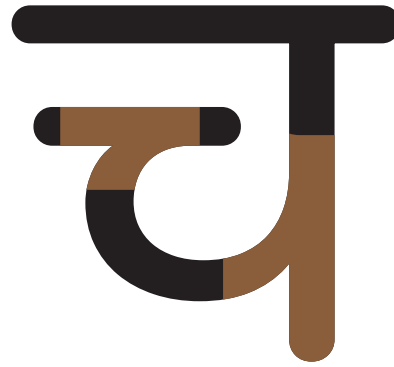


**Curvatures are circular.**





**Apertures are circular.**



**Curves join to verticals  
or horizontals are smooth.**



**Modulation is slow.**



**Turns are curvilinear**



**End knot is dragged which  
is actually not a knot.**

These are the core features of Samar Devanagari. Keeping all that in mind I had to start Samar light. These all features should be in light also, it is a matter of consistency when we are designing a full font family.

## Ek Mukta Study

अ

घ











ढ

क

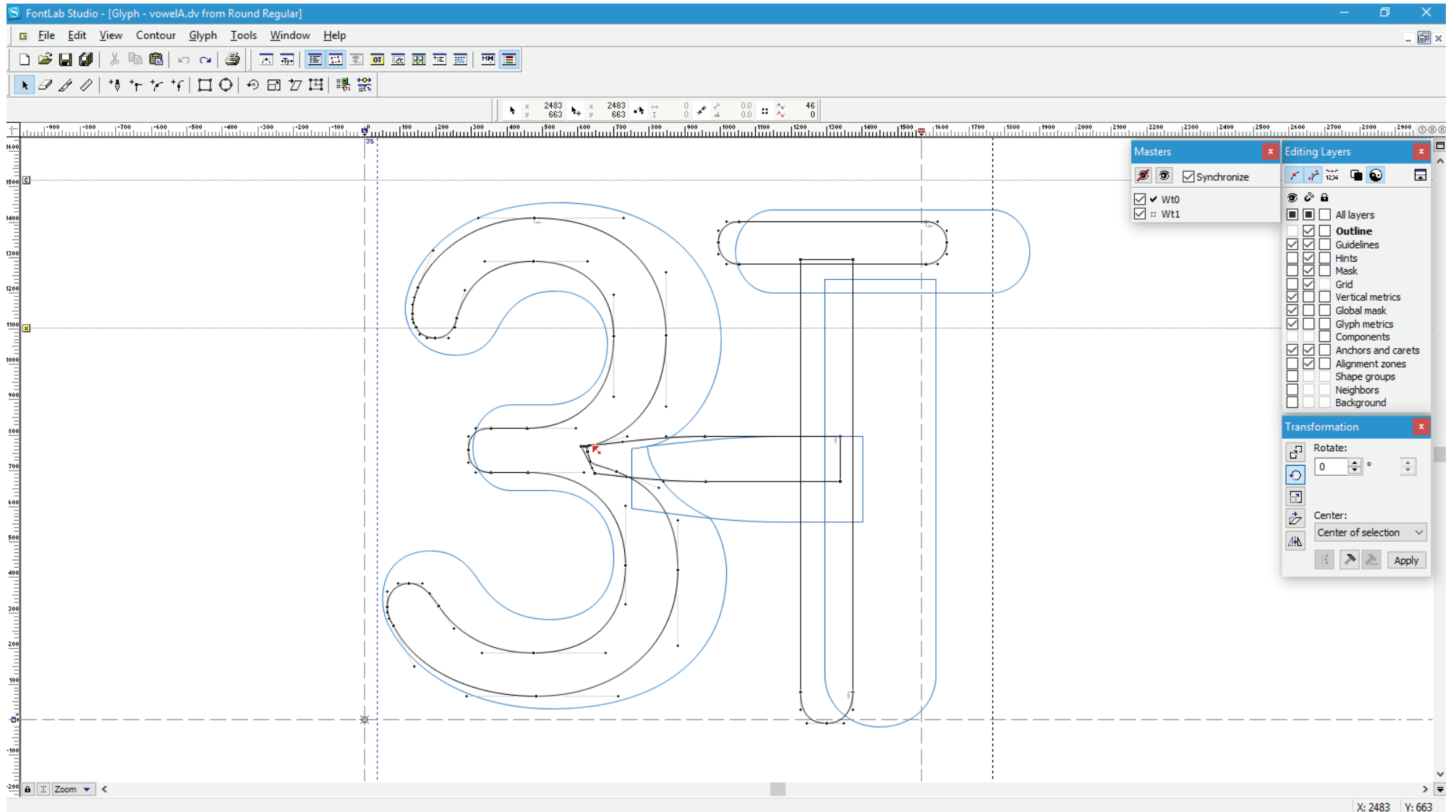
२

After studying 'Samar' my main concern was to make it lighter and I had to know the things, which are crucial when we are making a lighter version of a font. So I took inspiration from font.

## Determining Stroke widths

			Regular Width– 100 %	Light Width– 78 % of Regular
Siro Rekha			153	119
Vertical stroke			181	141
Horizontal Curve			160	122
Vertical Curve			188	148
Bar/ Horizontal			155	126

# Reducing Weight



## Comparison with Regular and Bold

अ अ अ

## Basic Character Set

अ आ इ ई उ ऊ ए ऐ ओ औ  
क ख ग घ ङ च छ ज झ ट ठ  
ड ढ ण त थ द ध न प फ ब  
भ म य र ल व श ष स ह क्ष  
त्र ज्ञ ० १ २ ३ ४ ५ ६ ७ ८ ९

## Conjuncts

इं ठं जं प क ट  
मं द ड ठ ड़ ष

# Spacing

## Eye Judgments are more important than any arithmetic parameter.

Every character has a different shape, and they are surrounded by the unique amount of white space. If we keep arithmetically equal space between the characters, they would not be balanced because they are different shapes from each other. In that case eye judgments are much more important to balance the space between letters.

There are different shapes (see figure 10). In the top row spacing is arithmetically equal, but it does not seem that they are equal. And in the bottom one spacing is done visually to maintain the harmony. The same thing has applied in this font to set the positioning of side bearing.





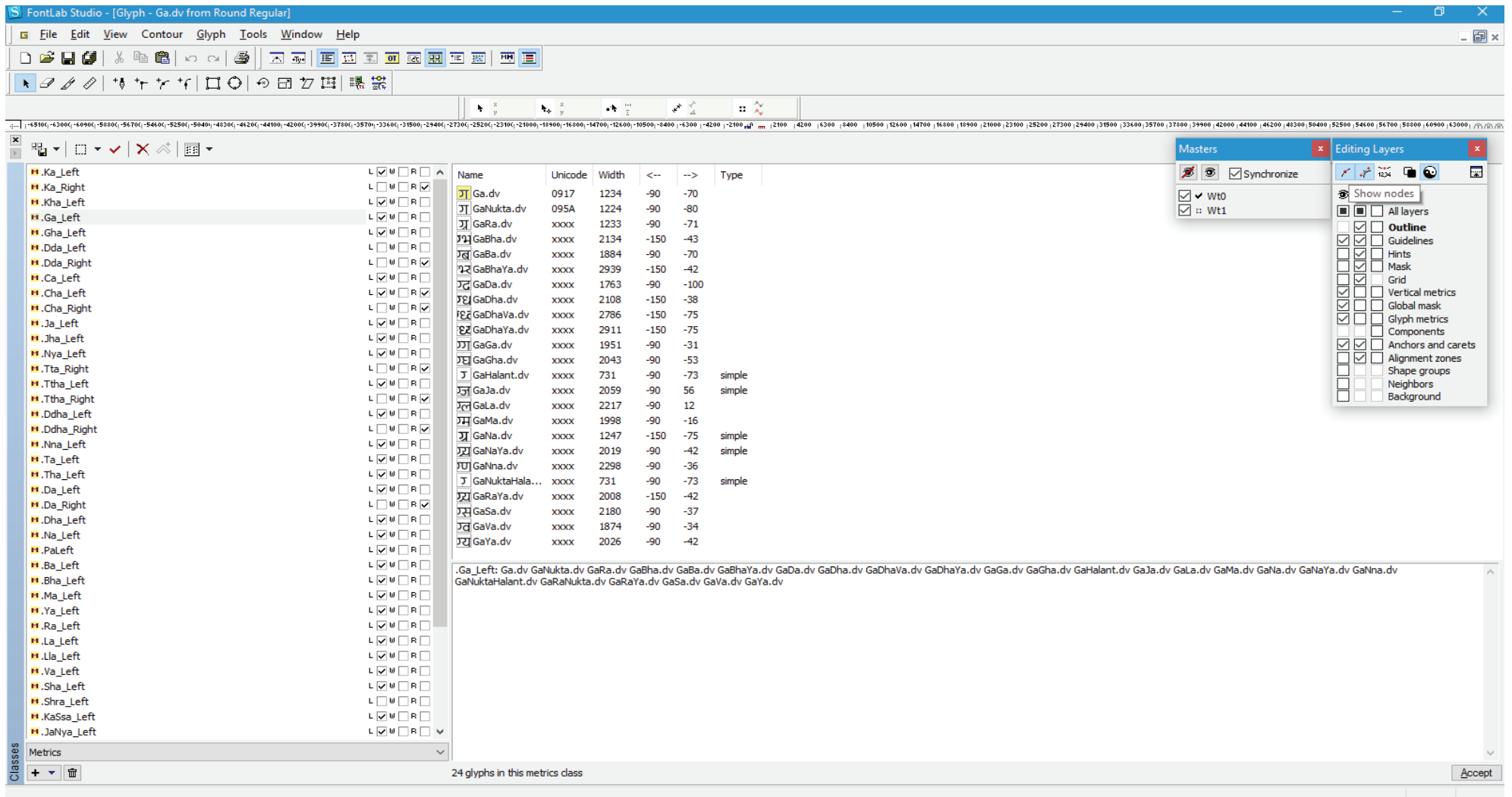
## Methods

Every character sits on an invisible rectangular. Spacing is decided by the width of the side bearings, the distance from the character shape to each side of the rectangle.

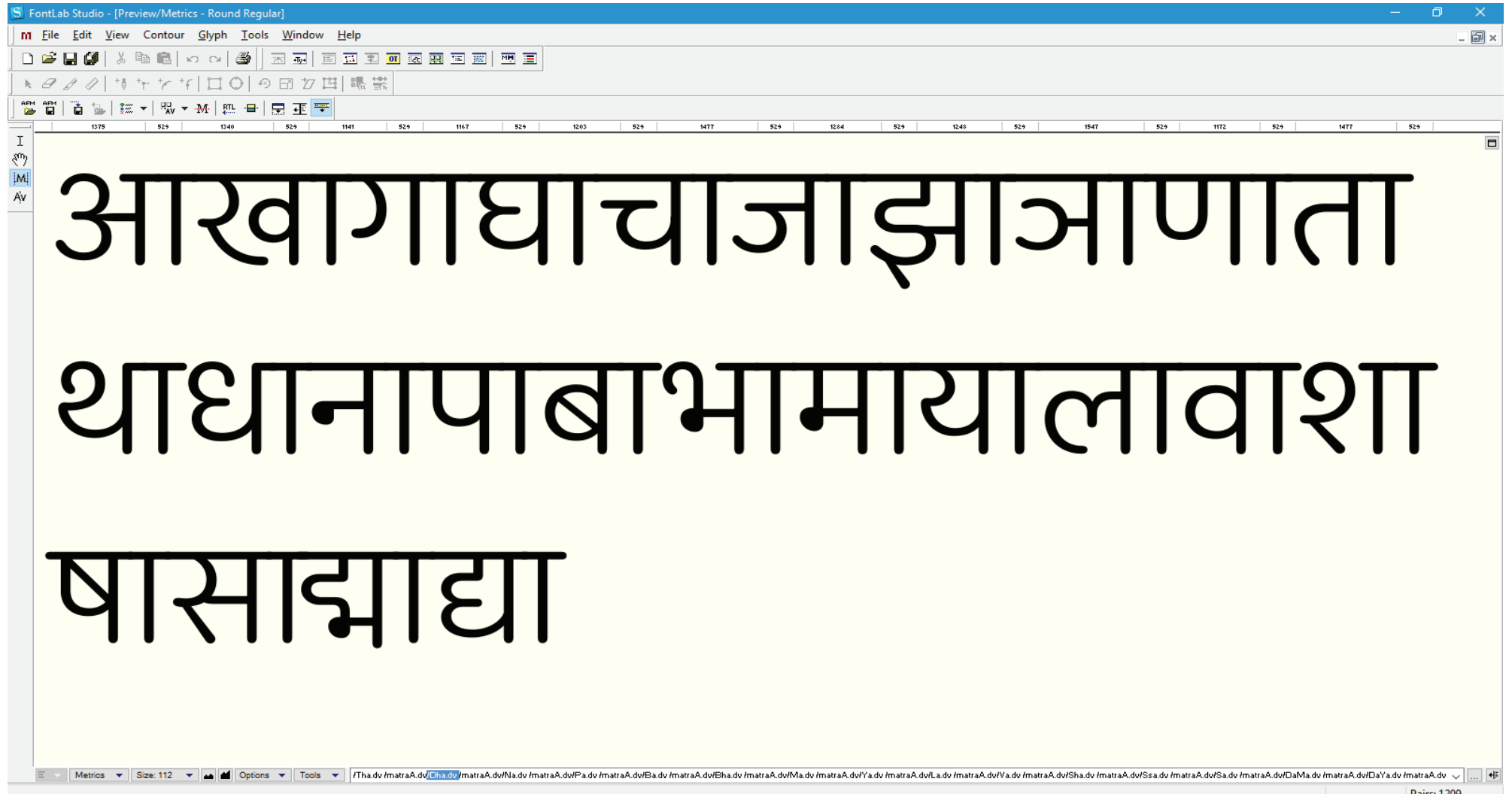
To set the side bearing, we make metrics classes to group the characters according to the similarity between them. All letters which are similar from the left side can be one group and which have the same right side can be another group.

For Example, once we have the left side bearing of the letter 'ग', we have got the left side bearings of the letters ग़ ग्र ग्ग गघ गज गण गद गध ग्र गब गभ गम गय गल गव ग्स गध्व गध्य ग्र्य गभ्य ग्र्य गल र ॠ as well. Using the same method, side bearings have positioned for all the characters.

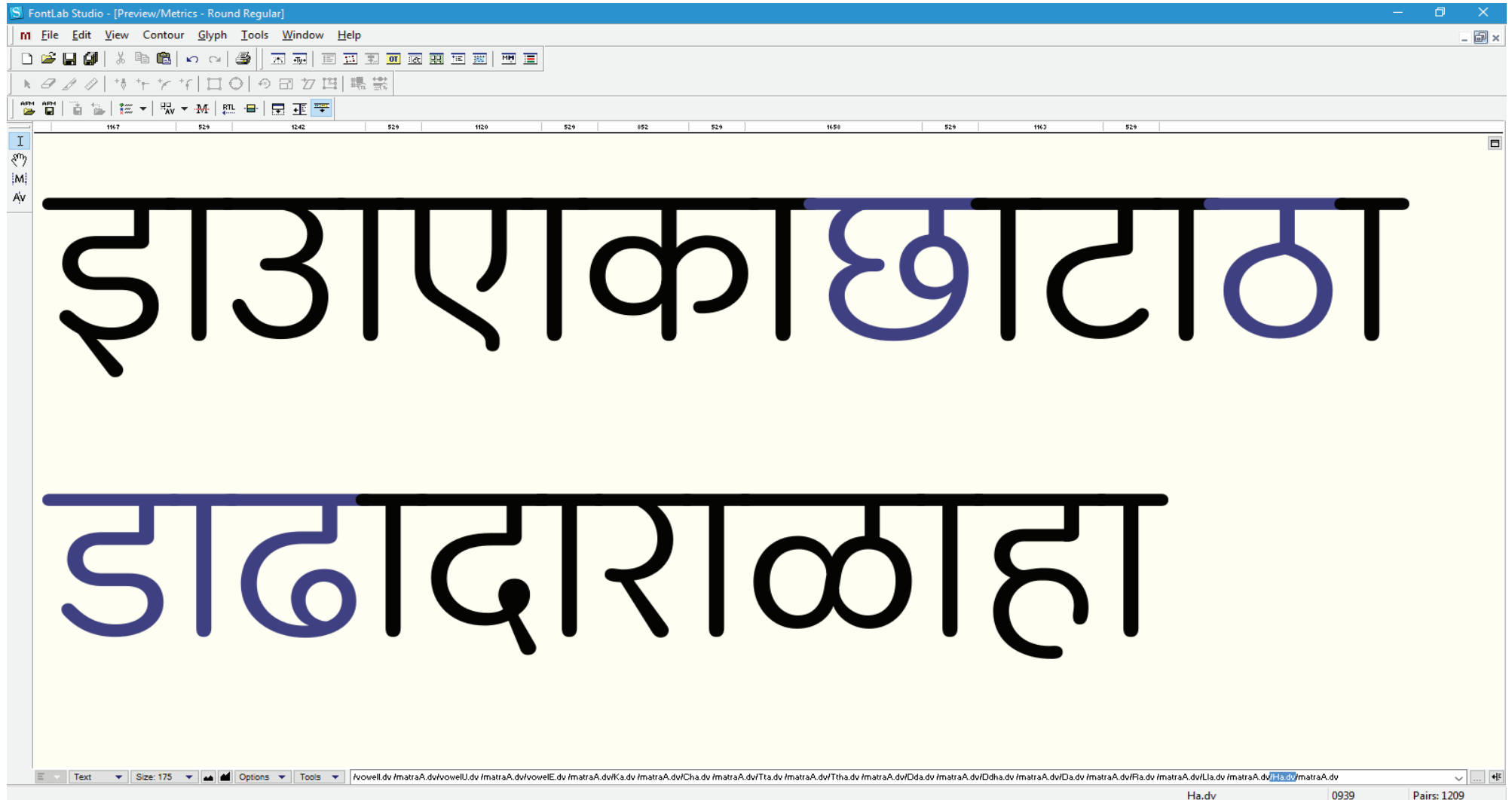
# Metrics Classes



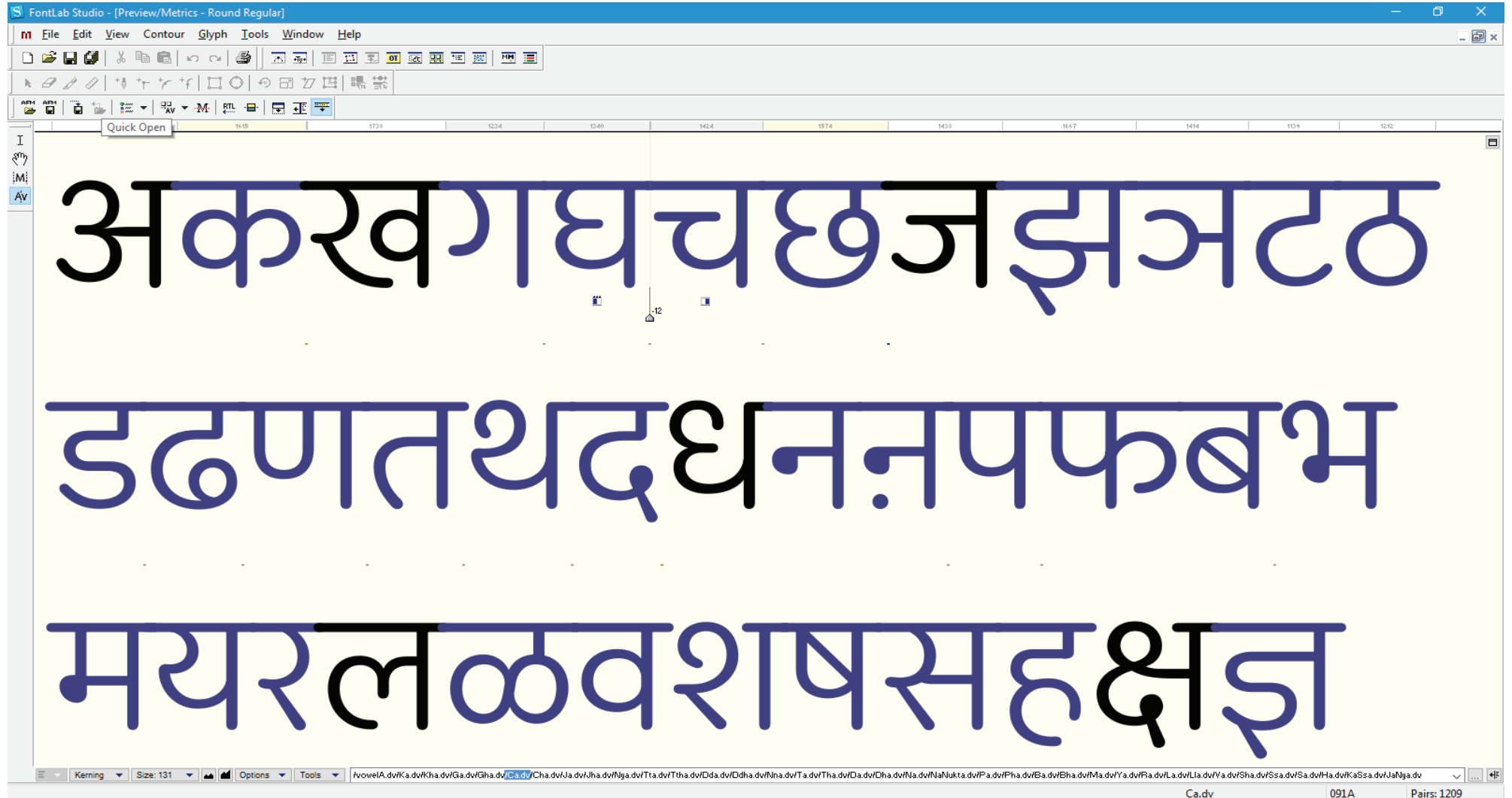
## Spacing: Kana with full verti-bar letters



## Spacing: Kana with letters (which doesn't have a bar)



## Spacing: letter to letter



# Basic of AFDKO (Adobe Font Development Kit for Open Type)

AFDKO is a set of Tool/Programs that use to add Open type data to a fully designed postscript/True type font.

## **MakeOTF**

It is a program that builds Open type font. To use makeOTF, we need to have a set of text files. There will be minimum three text files. These text files are for different purposes. Text document's names are predeclared.

### **1. FontMenuNameDB**

This text file provides font menu names.

### **2. GlyphOrderAndAliasDB**

This text file provides Glyph names, Unicode value to the glyphs and order of the glyphs.

### **3. Features**

This text file provides Open Type layout feature rules and open type tables.

- A. Defining
- B. Substitution
- C. Positioning
- D. Grouping

## Conclusion

Type designers work on their typefaces for years. It takes dedication and tremendous amounts of patience. Working on this project helped me to understand the font design process. One month was not enough to complete all the glyphs but it was a good start for my academic project in type design and development. Ek type gave me a platform to understand the type design process by allowing me to work on their ongoing project. Thanks again to Ek type team.

# References

## Books

Adrian Frutiger - Typefaces: The Complete Works  
Book by Adrian Frutiger and Heidrun Osterer

The Anatomy of Type: A Graphic Guide to 100 Typefaces Book by L. Stephen Coles

Some marginal notes on typography  
Book by Hermann Zaph

## Web

<http://typographica.org/>  
[http://designwithfontforge.com/en-US/Designing\\_Devanagari\\_Typefaces.html](http://designwithfontforge.com/en-US/Designing_Devanagari_Typefaces.html)  
<http://66.147.242.192/~operinan/2/2.11/index.html>

## Font

Samar  
Univers  
Baloo  
Ek Mukta Devanagari  
Kohinoor Devanagari  
Frutiger Devanagar  
Yantramanav