

Releasing Vedic and Indic Content as Web Applications

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Agenda

- Options for Web Search in Indic and Vedic Literature
 - Overview of Needs, tools and options
- Releasing apps for Vedic and Indic Content
 - www.parankusa.org
 - A web site for structured content storage, search and browse of Indic and Vedic content
- Vedic Editor
 - An free application for creating and editing Vedic content

Introduction

- Indic and Vedic literature is being made available in various forms over the Web
- Indic and Vedic content is
 - Very rich in potential
 - Calls for deeper analysis
- Hosted content mostly replicates the paper form
 - Most sites simply offer documents for download
 - No effective interface to search for targeted information
 - No metadata-based navigation to specific portions of text
- Generic search engines are inadequate for analysis
- Here we consider options for search and analysis and compare the options based on various factors

Pre-Requisites for Searchable Content

- Textually represented
- Characters are Unicode based
- Use the Unicode Indic Subset
- Content is error-free and clearly separates metadata
- If Vedic, content allows Vedic accents
- Stored in files on relational databases
- Accessible over the web

Evaluating Options

Options

- Direct Indic Entry
- English Transliterated Indic
- Simple English
- Canonicalized
- Master Data based
- Structured search

Evaluation Criteria

- Ease of Use
- Flexibility
- Pre-processing
- Accuracy
- Server-side Effort
- Advanced Use Cases

Direct Indic Input



Enter Text

राम

Search

- Enter text directly in a text box in Indic form
 - Use h/w s/w or virtual keyboards and mapping schemes
- Ease of Use
 - Requires installation and learning curve
- Flexibility
 - Issues with spelling
- Pre-processing
 - Indic to Indic cross transliteration
- Accuracy
 - Gain or loss in Indic-Indic conversion
- Server-side Effort
 - Simple web application and text files
- Advanced Use Cases
 - Difficult to support

English Transliterated

Enter Text	rAma kaThA	To Indic	राम कथा	Search
------------	------------	----------	---------	--------

- English entry entered and transliterated to Indic form
 - Transliterated form used for search
- Ease of Use
 - Familiar keyboard but need to learn extensions, retype and correct
- Flexibility
 - Issues with spelling as well as with transliteration
- Pre-processing
 - English-Indic plus Indic-Indic transliteration
- Accuracy
 - Mismatches due to gain or loss in English-Indic plus Indic-Indic
- Server-side Effort
 - Simple web application and text files
- Advanced Use Cases
 - Difficult to support

Simple English

Enter Text	rama	To Indic	रम,राम,रमा,रामा	Search
------------	------	----------	-----------------	--------

- English entry entered with no extensions
 - Mapped to multiple forms prior to search
- Ease of Use
 - Simple and easy. Popular style on web.
- Flexibility
 - Allow variations that can result in a wider match
- Pre-processing
 - Transliterate, to multiple forms allow for spelling idiosyncrasies
- Accuracy
 - Mismatches due to wide variations, limitations of English and transliteration errors
- Server-side Effort
 - Handling variations, limitations, sorting and ranking output
- Advanced Use Cases
 - Difficult to support

Canonicalized

Enter Text	gunasheekaran	Canonicalize	gunsekrn	Search
	गुणशेकरन्			

- User can choose Indic/English/Transliterated variants
 - All input kinds are converted to a common form
 - Stored data is also canonicalized
 - Match canonicalized input against canonicalized data
- Ease of Use
 - As easy as any of the earlier mechanisms
- Flexibility
 - Canonicalization allows reduction of variations
- Pre-processing
 - Transliterate, canonicalize, match
- Accuracy
 - More accurate than basic English and more tolerant than direct Indic
- Server-side Effort
 - Back-end programs to canonicalize stored data
- Advanced Use Cases
 - Difficult to support

Master-Data based navigated Search

The screenshot shows a web application interface with a light blue header. The header contains the text 'Choose Granularity' followed by two radio buttons: 'Prashna' (which is selected) and 'Anuvaka'. Below the header is a section titled 'Go to Section'. It contains a label 'DivisionName' and a text input field with the value 'संहिता (Samhita)'. To the right of the input field is a dropdown arrow. Further right is a label 'Kanda Prashna' and two dropdown menus, each showing the value '1'.

- Pre-analyze, categorize and create master data to navigate content.
 - Load master data in search page and allow navigation through master data
- Easy to use:
 - Allows the user to anticipate results
- Flexibility
 - Limited to what the master data can provide
- Pre-processing
 - None
- Accuracy
 - High as it is driven by pre-generated data
- Server-side Effort
 - Significant effort in creating master data correctly from content.
 - Web application and database design and implementation
- Advanced Use Cases
 - Limited

Structured search

Choose Search Fields

<input type="radio"/> Sloka No	<input type="text"/>	<input type="radio"/> Sloka Start Words	<input type="text"/>
<input type="radio"/> Namavali No	<input type="text"/>	<input type="radio"/> Namavali	<input type="text"/>
<input type="radio"/> Name	<input type="text"/>	<input type="radio"/> Topic	<input type="text"/>
<input type="radio"/> Sloka Starts With	<input type="text" value="अ"/>	<input type="radio"/> Sloka Contains	<input type="text" value="अ"/>
<input type="radio"/> Name Starts With	<input type="text" value="अ"/>	<input type="radio"/> Name Contains	<input type="text" value="अ"/>
<input type="button" value="Search"/>			

Transliteration

Language Transliteration Option

अ

Language

ो	१	२	३	४	५	६	७	८	९	०	-	०
ो	े	ा	ी	ू	ब	ह	ग	द	ज	ड	ॱ	ौ
ो	े	॰	ि	ु	प	र	क	त	च	ट		
े	ं	म	न	व	ल	स	,	.	य			
<input type="button" value="ESC"/> <input type="button" value="SHIFT"/> <input type="button" value="SPACE"/> <input type="button" value="VEDIC"/> <input type="button" value="HELP"/>												

Structured Search

- Vedic or Indic literary work is presented to the user as a fully functional web application with a tailor-made web interface
- The creational effort first starts by significantly editing, processing and structuring data

No	Verse	Word	Translated Form	Root word	Etymology	Containing sloka
3	1	वषट्कारः	One who pervades	vas	The root is 'vas' meaning कान्ति (luster) and the suffix 'at' is added. The substitute 'sha' takes the place of 'sa' in the root 'vas'.	विश्वं विष्णुर्वषट्कारो भूतभव्यभवत्प्रभुः । भूतकृद् भूतभृद्भावो भूतात्मा भूतभावनः ॥ 1 ॥

- Elemental composition, linking and referencing
- Proofing, sanitization, review
- Database tables designed for the content
- Web application specially designed to show the content
- Free-text search, input/output transliteration, virtual keyboards

Structured Search

- Easy to use:
 - Allows the user anticipate results
- Flexibility
 - Limited to what the master data can provide
- Pre-processing
 - None for master driven navigation. Required for free-text
- Accuracy
 - Highest as it is driven highly categorized master data
- Server-side Effort
 - Significant effort in creating master data correctly from content, categorizing, linking and cross referencing
 - Much more effort for database design and data import
 - Design, implementation and testing of web application requires skilled development team
- Advanced Use Cases
 - Many

Comparison

Mechanism	Ease of Use	Flexibility	Pre-processing	Accuracy	Creation Effort	Advanced use-cases
Indic Input Text	Low	Medium	Low	High	Low	No
English Transliterated	High	Medium	Low	Medium	Low	No
Basic English Input	High	High	High	Low	Low	No
Canonicalized	High	High	Depends	High	Medium	No
Master Data Based	Very High	Medium	Very Low	Very High	High	Few
Fully Structured	Highest	Highest	Variable	Highest	Highest	Many

Summary

- Need to move past view and download usage patterns to seriously exploit the potential inherent in Vedic and Indic content
- Number of choices of simple and complex search mechanisms exist
- Choice of mechanism results in tradeoffs that are important to understand to make the right choice
- No single mechanism offers the best characteristics when analyzed from all perspectives
- Content categorization, data design, processing and presentation mechanisms need due consideration to support serious analytical needs

Parankusa.org (www.parankusa.org)



- Dedicated to Late Salakshana Ghanapathi, MahaVidvan, Bhooloka-NityaSuri, U.Ve. ***Sri Parankushacharya Swami***
 - An illustrious scholar
 - An authority on Krishna Yajurveda, Divya Prabandhams, Dharma shastras, Pourohitya, Agama, Vedanta etc.
 - A versatile teacher with a vast number of students, admirers and disciples
- A brainchild of Veda Varidhi, Veda Vijnana Siromani, Vaidika Bhushanam, Vacaspati , Samskrita Mitram, Shastra Ratnakara, Veda Vidya, Datta Peeta Asthana Vidvan, Ahobila Mutt Asthana Vidvan ***Ramanujacharya Swami***

Major Objectives of parankusa.org

- Hosting web applications for Veda-s, Divya Prabandhams, Stotra, Sampradaya granthas etc
- Hosting publications of rare, important books, manuscripts etc. on Vedic studies
 - Hosting research output on these works in various languages
- Hosting articles of high scholastic value and research in Sanskrit, Tamil, Kannada, English, Prakrit etc
- Hosting audio-video recordings of Kalakshepas, Upanyasa, utsavas etc

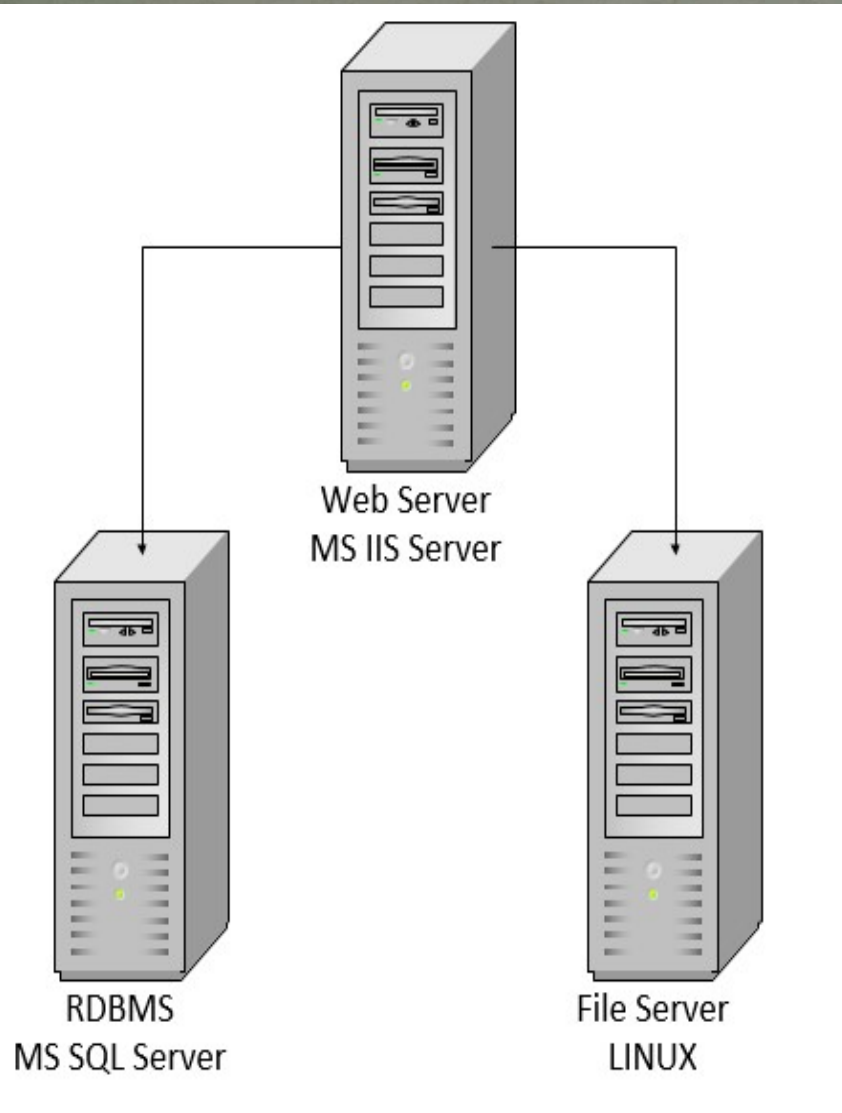
Parankusa.org Web Applications

- *Our vision is to structure, query, interlink and render Vedic and Indic content in powerful ways for scholarly purposes as well as to serve the needs for the casual reader*
- *In future we also want to create training content suitable for Vedic education (teaching and learning) which could be leveraged by traditional Vedic schools*

How is parankusa.org different?

- We host content as intelligent, 'active' web applications instead of passive documents
- Key Differentiators in parankusa.org
 - **Granularly Browse-able content**
 - You can navigate using granular metadata
 - **Searchable content**
 - You can type indic/vedic characters and search
 - **Structured Content**
 - Content is an RDBMS which has undergone schema design
 - **Inter-linked content**
 - Contents are related to each other instead of being islands
 - **Extensible design**
 - Schema/data in RDBMS can be enhanced
 - Programs for search and browse can be extended
 - Content display can be enhanced by programming

Deployment and Technologies



- Web applications built in .NET (ASP.NET Web Forms)
- Web applications query SQL Server through standard SQL for retrieving search/browse results
- Large size content in image, audio, video files stored in a separate Linux server
- Apps developed in Visual Studio 2010 and uploaded via FTP
- Host Browse and Search applications

Vedic and Indic Web Applications Release Process

Content Creation

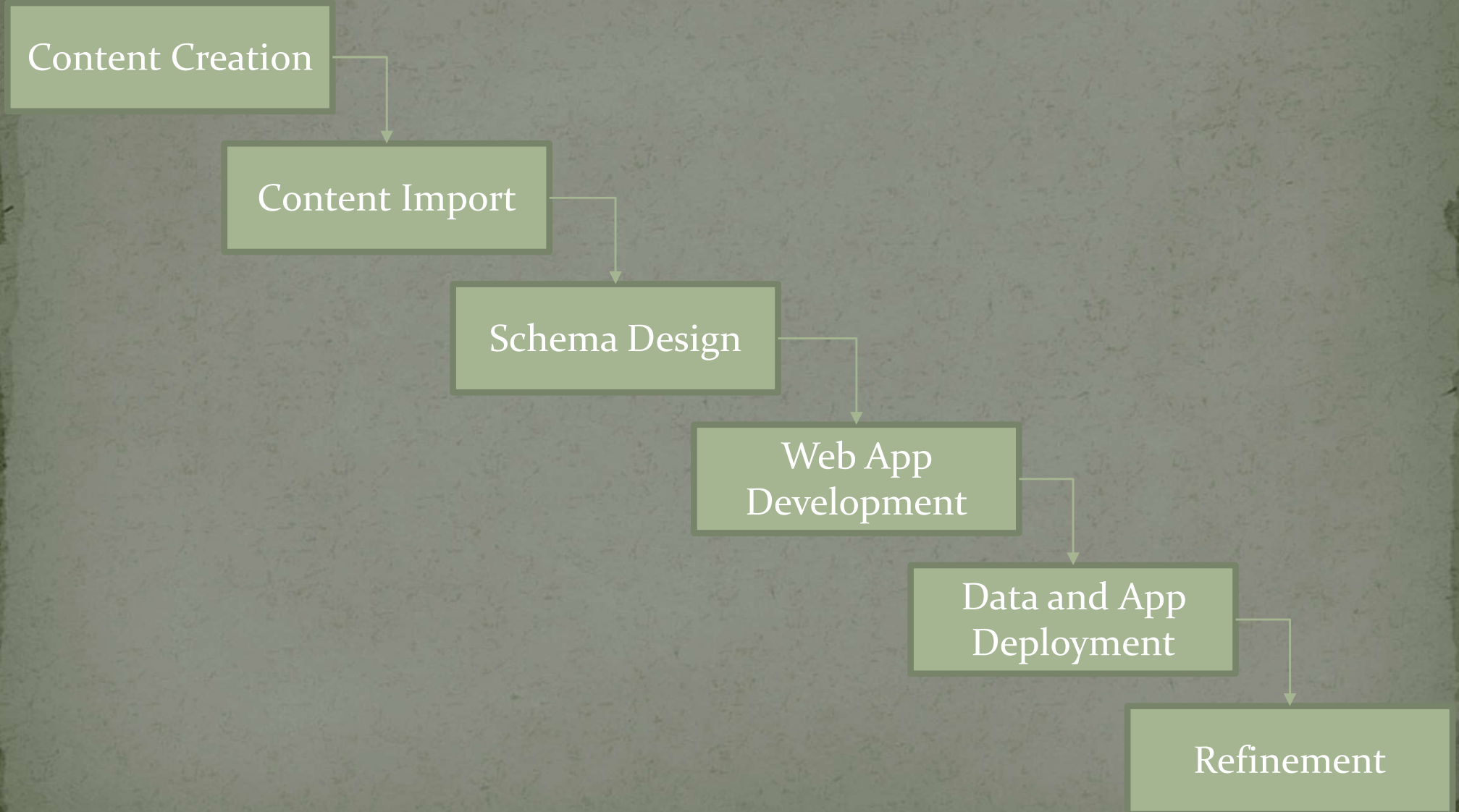
Content Import

Schema Design

Web App
Development

Data and App
Deployment

Refinement



Publishing - Content Creation

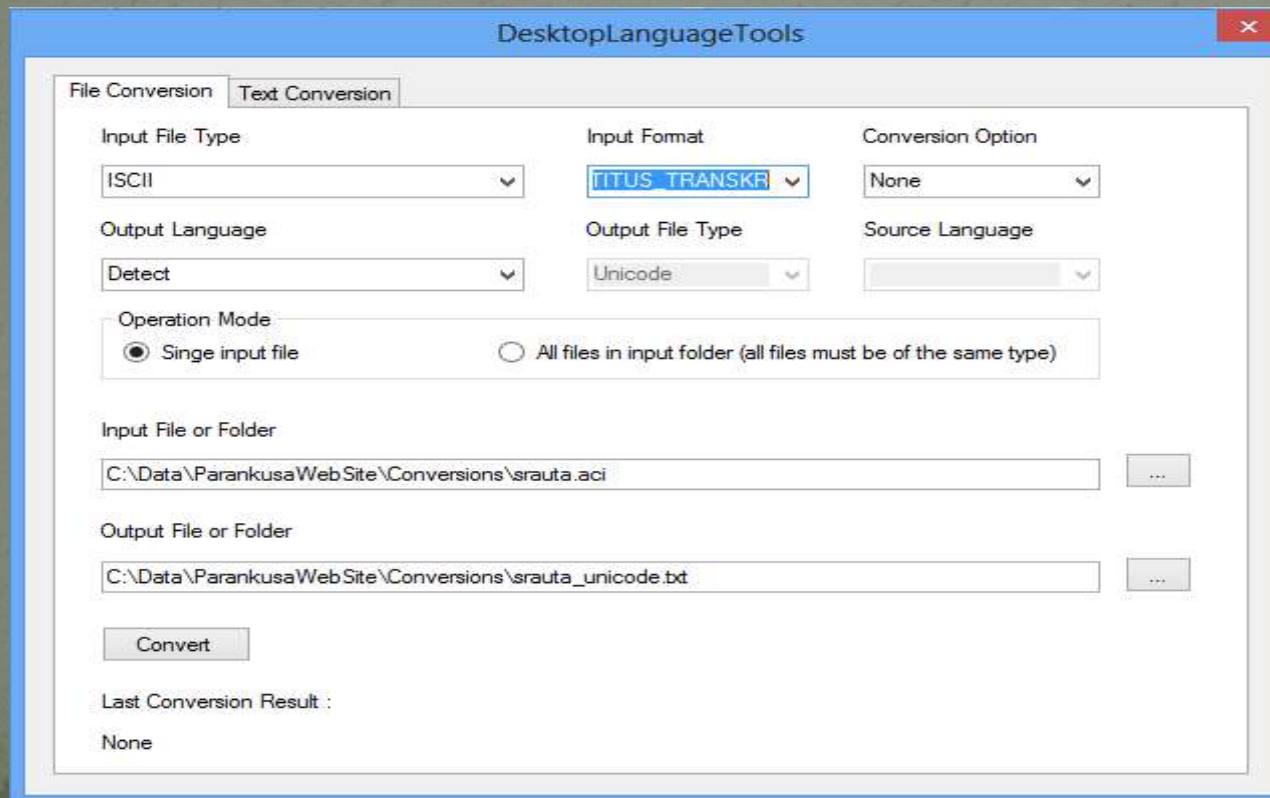
- Selecting Authentic Texts
- Digitization
 - By Data Entry (operators)
- Proof-Reading
- Creating links
 - Sequence numbering
 - References
 - Pictures, scanned images

Publishing – Content Import

- By Conversion from legacy formats
 - ACI/PCI
 - Text format conversion tool
- By Importing from existing typed/copied content
 - Text files
 - Text File data import tool
- By Importing entire databases
 - MS Access
 - Database Conversion Tool
- Tools still need to be perfected
 - Outputs currently need some further automated processing through custom scripts

Importing - Text format conversion tool

- Tool for importing from legacy text formats
 - Imports from ISCII, Unicode, TITUS
 - Output ISCII, Unicode
 - Can transliterate output to desired Indic language
 - Operates in interactive/batch mode

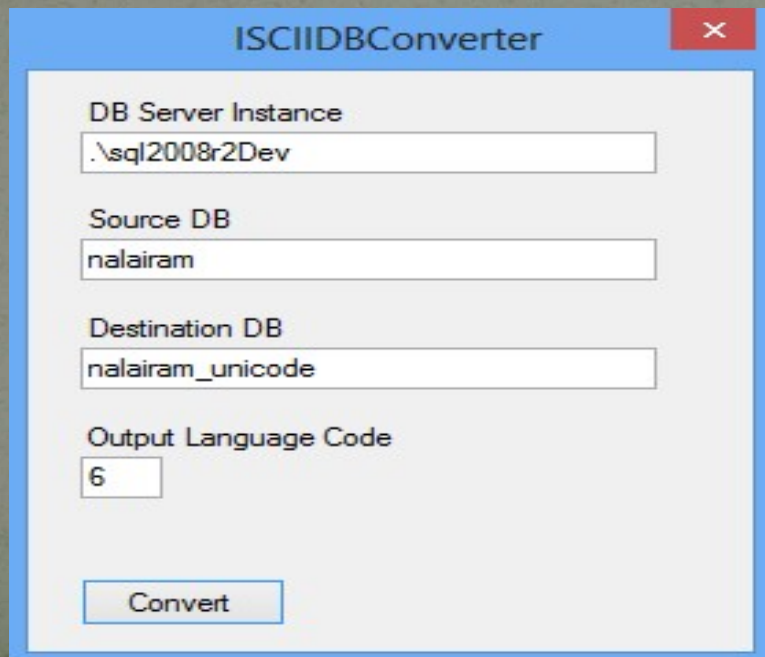


The screenshot shows a software window titled "DesktopLanguageTools" with a "Text Conversion" tab selected. The window contains several configuration options for text conversion:

- Input File Type:** A dropdown menu set to "ISCII".
- Input Format:** A dropdown menu set to "TITUS TRANSKR".
- Conversion Option:** A dropdown menu set to "None".
- Output Language:** A dropdown menu set to "Detect".
- Output File Type:** A dropdown menu set to "Unicode".
- Source Language:** An empty dropdown menu.
- Operation Mode:** Two radio buttons; "Single input file" is selected, and "All files in input folder (all files must be of the same type)" is unselected.
- Input File or Folder:** A text field containing "C:\Data\ParankusaWeb Site\Conversions\srauta.aci" with a browse button ("...") to its right.
- Output File or Folder:** A text field containing "C:\Data\ParankusaWeb Site\Conversions\srauta_unicode.txt" with a browse button ("...") to its right.
- Convert:** A button located below the file paths.
- Last Conversion Result:** A label with the text "None" below it.

Importing – DB conversion

- Tool for converting Access database with ISCII content
 - SQL Server Integration Services used to import data from Access to SQL Server
 - Conversion tool converts imported columns in with ISCII content to Unicode columns in SQL Server
 - Tool transliterates to desired output language

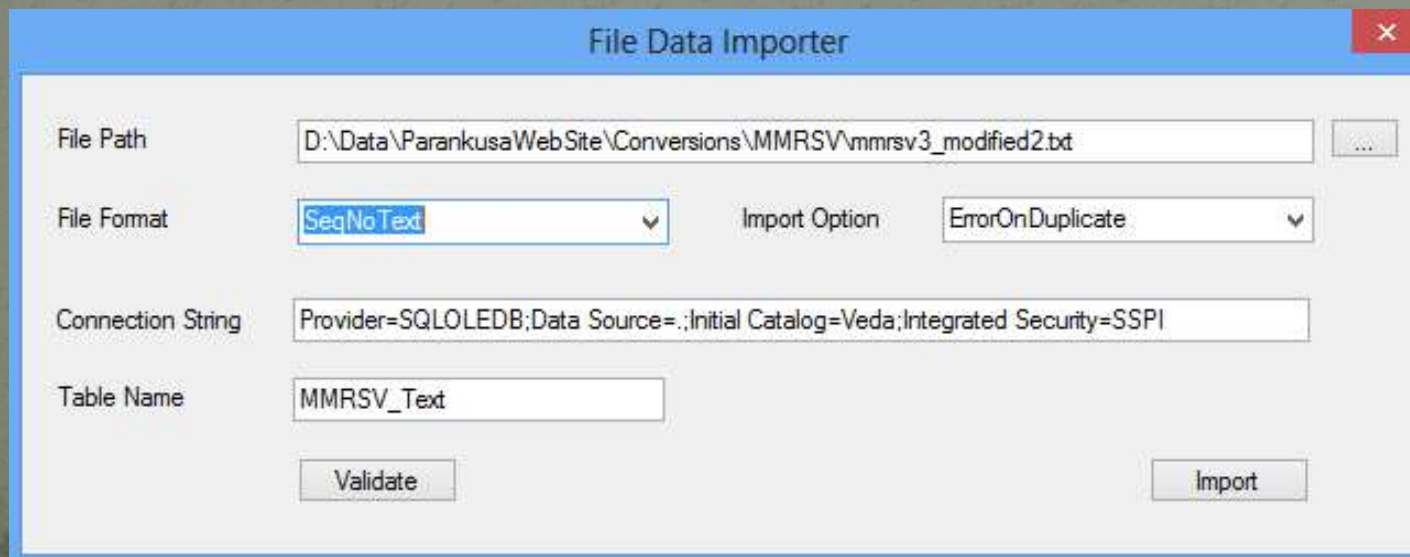


The screenshot shows a Windows application window titled "ISCII DB Converter". It contains four text input fields and a button. The first field, labeled "DB Server Instance", contains the text ".\sql2008r2Dev". The second field, labeled "Source DB", contains "nalairam". The third field, labeled "Destination DB", contains "nalairam_unicode". The fourth field, labeled "Output Language Code", contains the number "6". At the bottom of the window is a button labeled "Convert".

Field Label	Value
DB Server Instance	.\sql2008r2Dev
Source DB	nalairam
Destination DB	nalairam_unicode
Output Language Code	6

Importing – Text File Import tool

- Text File Import Tool is used to
 - Read data from text files with numbered lines
 - Sequence No, Newline, Text
 - Sequence No, Text
 - Text, Sequence No
 - Auto create a table in an RDBMS
 - Insert rows into the table
 - Validate file, report errors in import

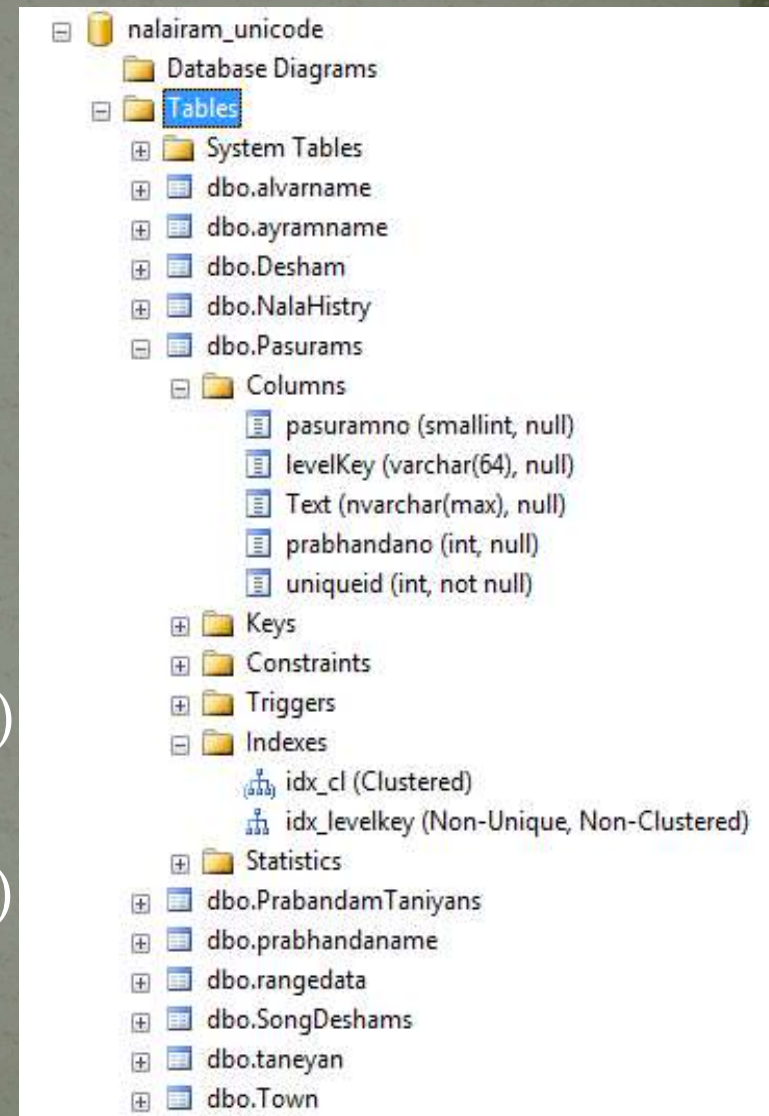


The screenshot shows a Windows-style dialog box titled "File Data Importer". It contains several input fields and buttons. The "File Path" field is set to "D:\Data\ParankusaWebSite\Conversions\MMRSV\mmrsv3_modified2.txt". The "File Format" dropdown is set to "SeqNoText". The "Import Option" dropdown is set to "ErrorOnDuplicate". The "Connection String" field contains "Provider=SQLOLEDB;Data Source=.;Initial Catalog=Veda;Integrated Security=SSPI". The "Table Name" field is set to "MMRSV_Text". At the bottom, there are two buttons: "Validate" and "Import".

File Path	D:\Data\ParankusaWebSite\Conversions\MMRSV\mmrsv3_modified2.txt		
File Format	SeqNoText	Import Option	ErrorOnDuplicate
Connection String	Provider=SQLOLEDB;Data Source=.;Initial Catalog=Veda;Integrated Security=SSPI		
Table Name	MMRSV_Text		
Validate		Import	

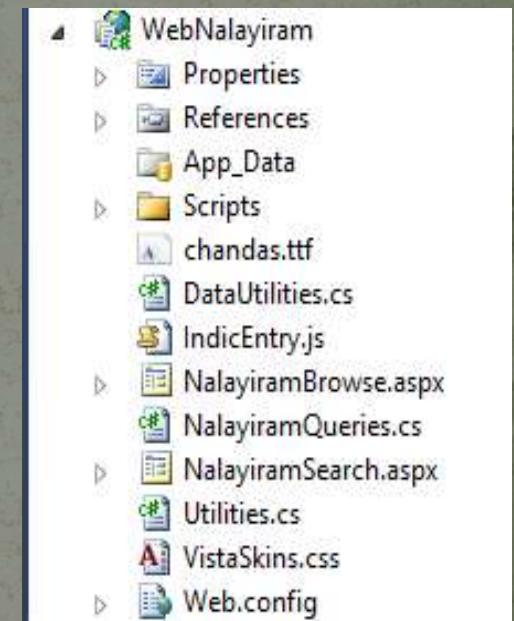
Publishing – Schema Design

- Imported content in RDBMS is re-designed and corrected for structure
 - **Data Type corrections**
 - (eg: Sequence No format)
 - **Master Data Linking**
 - (eg: chapters, sections)
 - **Relationships**
 - (eg: links b/w master data and content)
 - **Cross References**
 - (eg: links b/w tables of different books)



Publishing – Web App Development

- Basic UI Design
 - Navigation elements/controls
 - Content Controls
 - Links and Paging controls
- Application development
 - Web Layer – Rendering Logic
 - Population of navigation controls and data
 - Data Access Layer – Queries, Paging, Traversal
 - Accessing RDBMS
 - Utilities – Conversion, transliteration etc
 - Eg: Language conversion in display
 - Content specific formatting/rendeing
 - Eg: Links with query parameters



Publishing Web App Development

- Support tools/utilizes are created for special needs of Vedic/Indic content on the web
 - Data Entry on the Web
 - We offer a Java script based Indic/Vedic Web Keyboard
 - Rendering options
 - Render in Nandinagari/devanagari
 - Structured browsing, linked browsing
 - See demonstration
 - Transliteration
- Support tools are created for the above

Publishing - Deployment

- Data Export Tool
 - Exports local RDBMS content to delimited file
- Upload
 - Web application pages and binaries are uploaded to web site via FTP
- Schema Creation
 - SQL Scripts used to create schema in production site
- Data Import Tool
 - Imports data from uploaded delimited text files to RDBMS on web site
- Depending on the hosting provider, this process could be simpler or more complex

Publishing - Refinement

- Testing released content
 - Could indicate issues with content/structure
 - These are corrected on a case-by-case basis
- Content enrichment
 - More attributes/data could be added to the content
 - These are locally corrected and incrementally updated
 - Eg: Link to Commentaries
- Application enrichment
 - Some features could be requested by viewers
 - Web apps are enhanced for this (e.g: a different browse type)
- Export formats
 - Some people may prefer reading in PDF rather than web
 - Tool to export from RDBMS to PDF

Parankusa.org Web Applications

Web Applications for Vedas and Sanskrit Works

Access Applications

General

[Language Transliteration](#)

Vishnu Sahasranama

[Upodghatha Search](#)

[Upodghatha Browse](#)

[Sahasranama Search](#)

[Sahasranama Browse](#)

Krishya Yajur and Rg Vedas

[Krishna Yajurveda Browse \(Saraswata System\)](#)

[Krishna Yajurveda Search \(Saraswata System\)](#)

[Krishna Yajurveda Anuvakas Start Phrases \(Sorted\)](#)

[Krishna Yajurveda Browse \(Arsheya System\)](#)

[Krishna Yajurveda Search \(Arsheya System\)](#)

[Arsheya to Saraswata Mapping Table](#)

[Key to NumerbingScheme](#)

[Kandanukramanika Source \(Scanned Images\)](#)

[Rg Veda Browse](#)

[Rg Veda Search](#)

[Sama Veda Browse](#)

[Sama Veda Search](#)

Vyakaranam (Grammar) Works

[Browse Vyakaranam Works](#)

[Search Vyakaranam Works](#)

Manameya Rahasya Shloka Vartikam

[Browse Manameya Rahasya Shloka Vartikam](#)

[Search Manameya Rahasya Shloka Vartikam](#)

Structured Knowledge Store

[Browse the structured knowledge store](#)

Downloads

[Indic Editor Desktop Application](#)

[Akshara Ramayanam \(In Multiple Indian Languages\)](#)

Structured Browse – Scope and Granularity

Browse Krishna Yajurveda

Choose Granularity

☐ Prashna ☒ Anuvaka

Go to Section

DivisionName Kanda Prashna Anuvaka

संहिता (Samhita) ▼ 1 ▼ 1 ▼ 1 ▼

- Browse at different granularities
 - Kanda, Prashna, Anuvaka, Panchati
- Browse at different scopes
 - Samhita, Bramhana, Aranyanka, Ekagni, Kataka
- Contrast with conventional ways
 - No need to download the full text
 - Not image based - You can copy paste to a text editor

Result Rendering

VedicText	SequenceNo	SequenceNo (Arsheya)	काण्डः (आर्षेयपाठः)	विषयः (आर्षेयपाठः)
प्रजापतिरकामयत प्रजाः सृजेयेति स तपोऽतप्यत स सर्पानसृजत सौऽकामयत प्रजाः सृजेयेति स द्वितीयम- तप्यत स वयारस्यसृजत सौऽकामयत प्रजाः सृजेयेति स तृतीयमतप्यत स एतं दीर्घितवादमपस्यतमवदत्ततो वै स प्रजा असृजत यत्तपस्तत्वा दीर्घितवादं वदति प्रजा एव तद्यजमानः [1]	1.3.1.1.1	4.16.1.1	वैश्वदेव-काण्डम्	औपानुवाक्यम् (मन्त्र-ब्राह्मणात्मकम्)
सृजते यद्वे दीर्घितोऽमेध्यमप्यत्यपास्मादीख्या क्रामति नीलमस्य हरो व्यैत्यबद्धमनो दरिद्रं चखुः सूर्यो ज्योतिषाश्च श्रेष्ठो दीर्घे मा मां हासीरित्याह नास्मादीख्याप क्रामति नास्य नीलं न हरो व्यैति यद्वे दीर्घितमभिर्वसति दिव्या आपोऽश्नान्ता ओजो बलं दीर्घाम् [2]	1.3.1.1.2	4.16.1.2	वैश्वदेव-काण्डम्	औपानुवाक्यम् (मन्त्र-ब्राह्मणात्मकम्)
तपोऽस्य निर्घन्त्युन्दीर्बलं धत्तोजो धत्त बलं धत्त मा मै दीर्घाम्मा तपो निर्वधिष्टेत्याहेतदेव सर्वमात्मन्येते नास्योजो बलं न दीर्घां न तपो निर्घन्त्यग्निर्वे दीर्घितस्य देवता सौऽस्मादेतहिं तिर इव यहिं याति तमीश्वरं रख्यासि हन्तोः [3]	1.3.1.1.3	4.16.1.3	वैश्वदेव-काण्डम्	औपानुवाक्यम् (मन्त्र-ब्राह्मणात्मकम्)
भद्रादभि श्रेयः प्रेहि बृहस्पतिं पुरएता ते अस्मित्याह ब्रह्म वै देवानाम्बृहस्पतिस्तमेवान्वारभते स एनं सम्पारयत्येदमंगन्म देवयजनम्पृथिव्या इत्याह देवयजनं ह्येष पृथिव्या आगच्छति यो यजते विश्वे देवा यदजुषन्तं पूर्वं इत्याह विश्वे होतदेवा जोषयन्ते यद्वाह्मणा ऋक्सामाभ्यां यजुषा संतरन्त इत्याह रक्सामाभ्यां ह्येष यजुषा संतरति यो यजते रायस्योषेण समिषा मदेमेत्याह शिषमेवेतामा श्रांस्ते ॥ [4]	1.3.1.1.4	4.16.1.4	वैश्वदेव-काण्डम्	औपानुवाक्यम् (मन्त्र-ब्राह्मणात्मकम्)

- In contrast to PDF/text files, results are rendered with extensible attribute information
 - We keep adding more attributes to results at the RDBMS (without regenerating the output) as we extend the metadata tree
 - E.g: we added Saraswata to Arsheya mapping last year allowing the output to show the correspondence

Linking and Cross Referencing

- Contents don't live in isolated islands
- At the RDBMS, tables cross-reference each other
 - One literary content is linked to other related works at a granular section level
- Applications pull the data along with the cross-references
- Permits navigation from a section of one work to a section of another
 - Main Work to Commentary (Samhita Anuvaka->Bhatta Bhaskara Bhashya)
 - Main Work to alternate commentary (Samhita Anuvaka->Sayana Bhashya)
 - Main work to Supporting work (Samhita->Ashtadhyayi)
 - Supporting Work to its elaboration (Ashtadhyayi->Kasika)
 - Commentary text to main work (reverse) (Bhashya->Samhita)

Linking and Cross Referencing

[Bhatta Bhaskara Bhashya](#) [Sayana Bhashya](#) [View Key to Sequence Numbering](#) [View आर्षेयपाठः \(Arsheya\) to सारस्वतपाठः \(Saraswata\) Mapping Table](#)

VedicText	SequenceNo
प्रत्युष्टं रक्षं प्रत्युष्टा अरांतयोऽग्नेर्वस्तेजिष्ठेन तेजसा निष्टपामि गोष्ठम्मा निर्मृक्षवृजिनं च सपत्नसाहं सम्मार्जिं वाचं म्प्राणक्षुः श्रोत्रं म्प्राज्योनिम्मा निर्मृक्षवृजिनं च सपत्नसाहीं सम्मार्ज्याशासाना सोमनसम्प्राजां सोभाग्यन्तनूम् । अग्नेरनुव्रता भुक्ता सन्नह्ये सुकृताय कम् । सुप्रजसंस्ता वयं सुपत्नीरुप [16]	1.1.1.10.1

Bhatta Bhaskara Bhashya

1.1.1.10.

1 गार्हपत्ये सुवादीन् प्रतितपति - प्रत्युष्टमिति ॥ व्याख्यातम् (ते.सं. 1.1.2) । तेजिष्ठेन तेजितृत्वेन इति षत्वम् । तेजितृशब्दात् तुच्छन्दसि (पा.सू. 5.3.59) इतीष्टानि तुरिष्ठमेयस्सु (पा.सू. 6.4.154)

Panini Ashtadhyayi

5.3.59.

तुच्छन्दसि

[Kasika](#)

Kasika

5.3.59.

तुः छन्दसि . तुः इति तृचोः सामान्येन ग्रहणम् .

Krishna Yajurveda Samhita

1.1.1.2.0

<सहस्रवल्शा अष्टात्रिंशच्च । (2)>

1.1.1.2.1

यज्ञस्य घोषदसि प्रत्युष्टं रक्षं प्रत्युष्टा अरांतयं प्रेयमंगाद्विषणां

Content Search – Web Keyboard

☒ Search by Phrase (Use keyboard or keypad to enter phrase)

☐ Search by SequenceNo. (Enter SequenceNo. in dotted 3 or 4 level notation)

☒ Do Not Match Accents ☐ Match Accents

Language Devanagari

ो	१	२	३	४	५	६	७	८	९	०	-	३
ौ	े	ा	ी	ू	ब	ह	ग	द	ज	ड	ृ	ौ
ो	े	्	ि	ु	प	र	क	त	च	ट		
े	ं	म	न	व	ल	स	,	.	य			
ESC	SHIFT	SPACE	VEDIC	HELP								

- Web Keyboard for entry
 - No installation needed
 - Use keyboard or mouse
 - Indic Languages
 - Vedic accents and Grantha script

Web Keyboard options

Indic Languages: Kannada



Vedic Accents



Search Output

Vedic Text	Division	Sequence	SequenceNo (Arsheya)	काण्डः (आर्षेयपाठः)	विषयः (आर्षेयपाठः)
नातांरीरस्य समृतिं वधानाम् । स रुजानां पिपिष इन्द्रशत्रुः । विश्वो विहाया अरतिः । वसुर्दधे हस्ते दक्षिणे । तरणिर्न शिश्रथत् । श्रवस्यया न शिश्रथत् । विश्वस्मा इदिषुध्यसे । देवत्रा हव्यमूर्हिषे । विश्वस्मा इध्मुकृते वारमृण्वति । अग्निर्द्वारा व्युण्वति ॥ 15 ॥	ब्राह्मणम् (Bramhana)	2.2.5.4.4	4.13.12.4	विश्वदेव- काण्डम्	उपहोमाः
1 । ऋषां । हुतपुत्र इति हुत-पुत्रः । वीन्द्रमिति वि-इन्द्रम् । सोमम् । एति । अहरत् । 2 । तस्मिन् । इन्द्रः । उपहवमित्युप-हवम् । ऐच्छत् । 3 । तम् । न । उपेति । अह्वयत् । 4 । पुत्रम् । मे । अवधीः । इति । 5 । सः । यज्ञवेशसमिति यज्ञ-वेशसम् । कृत्वा । प्रासहेति प्र-सहा । सोमम् । अपिबत् । 6 । तस्य । यत् । अत्यग्निष्यतेत्यति-अग्निष्यत् । तत् । ऋषां । आहवनीयमित्या-हवनीयम् । उपेति । प्रेति । अवर्तयत् । 7 । साहा । इन्द्रशत्रुरितीन्द्र-शत्रुः । वर्षस्र । इति । 8 । सः । यावत् । ऊर्ध्वः । पराविध्यतीति परा-विध्यति । तावति । स्रयम् । एव । वीति । अरमत । 9 । यदि । वा । तावत् । प्रवणमिति प्र-वनम् । [36]	पदपाठः (Padapatha)	6.2.4.12.1			
1 । ऋषां । हुतपुत्र इति हुत-पुत्रः । वीन्द्रमिति वि-इन्द्रम् । सोमम् । एति । अहरत् । 2 । तस्मिन् । इन्द्रः । उपहवमित्युप-हवम् । ऐच्छत् । 3 । तम् । न । उपेति । अह्वयत् । 4 । पुत्रम् । मे । अवधीः । इति । 5 । सः । यज्ञवेशसमिति यज्ञ-वेशसम् । कृत्वा । प्रासहेति प्र-सहा । सोमम् । अपिबत् । 6 । तस्य । यत् । अत्यग्निष्यतेत्यति-अग्निष्यत् । तत् । ऋषां । आहवनीयमित्या-हवनीयम् । उपेति । प्रेति । अवर्तयत् । 7 । साहा । इन्द्रशत्रुरितीन्द्र-शत्रुः । वर्षस्र । इति । 8 । यत् । अवर्तयत् । तत् । वृत्रस्य । वृत्रमिति वृत्र-मम् । 9 । यत् । अब्रवीत् । 10 । साहा । इन्द्रशत्रुरितीन्द्र-शत्रुः । वर्षस्र । इति । तस्मात् । अस्य । [8]	पदपाठः (Padapatha)	6.2.5.2.1			

Search Results

- Result of matching at RDBMS with Indic Collation
- Results rendered with attributes as in browse
- Can link in future to further references

Search Output - Nandinagari Rendering

Vedic Text	Division	Sequence	SequenceNo (Arsheya)	फाल्गुः (आर्षेयपाठः)	दण्यः (आर्षेयपाठः)
तातातीनरणा नमृते० दघाता म् । नञ् जुडाताः पपय ङ्ङङातुः । दङ्गो दङ्गाचा अतः । दङ्गय्ये हङ्गते दङ्गय्ये । तत्रात्तं ङाङ्गघत् । द्वादशपाचा त ङाङ्गघत् । दङ्गदशपा ङङ्गय्यपाणे । देवता हृदयमुहये । दङ्गदशपा ङङ्गय्यफुते दानमुदत । अतर्द्वाना दपुदत ॥ 15 ॥	ब्राह्मणम् (Bramhana)	2.2.5.4.4	4.13.12.4	दैङ्गददेव- फाल्गुम्	उपहोमाः
1 । ब्रह्मा । हुतपुत्र ङत हुत-पुत्रः । दीङ्गदधत द-ङ्गङ्ग म् । सोम म् । ङेत । अङ्गहत् । 2 । तर्गमङ्ग । ङङ्गङ्गः । उपहृदमङ्गप-हृदम् । ङैङ्गङ्ग । 3 । तम् । त । उपेत । अङ्गपात । 4 । पुत्रम् । मे । अङ्गधीः । ङत । 5 । नः । ङङ्गदेङ्गानधत ङङ्ग-देङ्गानम् । फुला । प्राङ्गहेत प्र-नङ्ग । सोम म् । अङ्गपात् । 6 । तर्गपा । ङत् । अङ्गङ्गङ्गङ्गतेङ्गते-अङ्गङ्गङ्ग । तत् । ब्रह्मा । अङ्गहृदतीङ्गमङ्गा -हृदतीङ्ग म् । उपेत । ङेत । अङ्गदतङ्गत् । 7 । नङ्गह । ङङ्गङ्गङ्गङ्गङ्गङ्गङ्ग- ङ्गङ्गङ्गः । दङ्गङ्गङ्ग । ङत । 8 । नः । ङादत् । उ-ङ्गङ्गः । पनाङ्गङ्गङ्गङ्गङ्ग पना-ङ्गङ्गङ्ग । तादत । नङ्गम । ङेद । दीत । अङ्गमत । 9 । ङङ्ग । द । तादत् । प्रदङ्गङ्गङ्ग प्र-दतम् । [36]	पदपाठः (Padapatha)	6.2.4.12.1			
1 । ब्रह्मा । हुतपुत्र ङत हुत-पुत्रः । दीङ्गदधत द-ङ्गङ्ग म् । सोम म् । ङेत । अङ्गहत् । 2 । तर्गमङ्ग । ङङ्गङ्गः । उपहृदमङ्गप-हृदम् । ङैङ्गङ्ग । 3 । तम् । त । उपेत । अङ्गपात । 4 । पुत्रम् । मे । अङ्गधीः । ङत । 5 । नः । ङङ्गदेङ्गानधत ङङ्ग-देङ्गानम् । फुला । प्राङ्गहेत प्र-नङ्ग । सोम म् । अङ्गपात् । 6 । तर्गपा । ङत् । अङ्गङ्गङ्गङ्गतेङ्गते-अङ्गङ्गङ्ग । तत् । ब्रह्मा । अङ्गहृदतीङ्गमङ्गा -हृदतीङ्ग म् । उपेत । ङेत । अङ्गदतङ्गत् । 7 । नङ्गह । ङङ्गङ्गङ्गङ्गङ्गङ्गङ्ग- ङ्गङ्गङ्गः । दङ्गङ्गङ्ग । ङत । 8 । ङत् । अङ्गदतङ्गत् । तत् । दृतङ्ग । दृतङ्गङ्गङ्ग दृत-नङ्ग । 9 । ङत् । अङ्गङ्गङ्ग । 10 । नङ्गह । ङङ्गङ्गङ्गङ्गङ्गङ्गङ्ग- ङ्गङ्गङ्गः । दङ्गङ्गङ्ग । ङत । तर्गपा त् । अङ्गपा । [8]	पदपाठः (Padapatha)	6.2.5.2.1			

○ View in Devanagari ● View in Nandinagari

- Output can optionally be rendered in alternate character rendering schemes

Tamil Nalayiram Pasurams - Browse

Browse Nalayiram

☐ Pasuram ☒ Prabandam ☐ Azhvar ☐ Ayiram ☐ Divya Desam

திருமாலை ▼

Pasuram	No	Ayiram	Azhvar	Prabandam	Divya Desam
காவலிற் புலனை வைத்துக் கலிதனைக கடக்கப் பாய்ந்து, நாவலிட் டுழிதரு கின்றோம் நமன் தமர தலைகள் மீதே, மூவுல குண்டு மிழந்த முதல்வநின் நாமம் கற்ற, ஆவலிப் புடைமை கண்டாய் அரங்கமா நகரு ளானே! (2) (1)	6.872	முதலாயிரம்	தொண்டரடிப்பொடியாழ்வார்	திருமாலை	திருவரங்கம்
பச்சைமா மலைபோல் மேனி பவளவாய் கமலச் செங்கண் அச்சுதா! அமர ரேறே! ஆயர் தம் கொழுந்தே! என்னும், இச்சுவை தவிர யானபோய் இந்திர லோக மாளும், அச்சுவை பெறினும் வேண்டேன் அரங்கமா நகரு ளானே! (2) (2)	6.873	முதலாயிரம்	தொண்டரடிப்பொடியாழ்வார்	திருமாலை	திருவரங்கம்

- Nalayiram content can be browsed independently by various attributes
 - Pasuram, Prabandam, Azhvar, Ayiram, Divya Desam
 - We plan to link this output to commentaries etc in the future

Tamil Nalayiram Pasurams – Search

Search Nalayiram

Enter search criteria

Prabandam Name

All

(Choose a prabandam from the list)

☒ Search by Phrase

நாரணன்

(Use keyboard or keypad to enter phrase)

☐ Search by PasuramNo

(Enter PasuramNo)

Search

24 records

31

Pasuram	No	Ayiram	Azhvar	Prabandam
நாடும்_ஊரும்_அறியவேபோய் நல்லதுழாயலங்கள் துடி நாரணன்போமிடமெல்லாம் சோதித்துழிதருகின்றாள் கேடுவேண்டுகின்றார்_பலருளர் கேசவனோடு_இவளை பாடுகாவலிடுமினென்றென்று பார்_தடுமாறினதே. 5.	1.290	முதலாயிரம்	பெரியாழ்வார்	பெரியாழ்வார் திருமொழி
அங்கொருகூறை அரைக்குடுப்பதனாசையால் மங்கியமானிடசாதியின் பேரிடும்_ஆதர்_காள்! செங்கணெடுமால்! சிரீதரா! என்று_அழைத்தக்கால் நங்கைகாள்! நாரணன் தம்_அன்னைனரகம்புகாள். 2.	1.382	முதலாயிரம்	பெரியாழ்வார்	பெரியாழ்வார் திருமொழி

- Nalayiram content can be searched
 - Tamil entry through web keyboard
 - Scoped search
 - Output with related attributes

Cross Language Rendering

Transliteration

Language Transliteration Option

Browse

Browse Results

ॐ विश्वं विष्णुर्वषट्कारो
भूतभव्यभवत्प्रभुः ।
भूतकृद् भूतभृद्भावो भूतात्मा
भूतभावनः ॥ 1 ॥

पूतात्मा परमात्मा च मुक्तानां
परमा गतिः ।
अव्ययः पुरुषस्साक्षी क्षेत्रज्ञोऽक्षर
एव च ॥ 2 ॥

योगो योगविदां नेता
प्रधानपुरुषेश्वरः ।
नारसिंहवपुः श्रीमान् केशवः
पुरुषोत्तमः ॥ 3 ॥

Transliteration

Language Transliteration Option

Browse

Browse Results

om viśvaṃ
viṣṇurvaṣaṭkāro
bhūtabhavyabhavatpra
bhuḥ .
bhūtakṛd

pūtātmā paramātmā ca
muktānāṃ paramā
gatiḥ .
avyayaḥ puruṣassākṣī
kṣetrajñōākṣara eva

yogo yogavidāṃ netā
pradhānapuruṣeśvaraḥ .
nārasimhavadapuḥ śrīmān
keśavaḥ puruṣottamaḥ
.. 3 ..

- We have enabled cross language transliteration and cross language search for certain content

Cross language linking and media

Browse Results

ॐ विश्वं विष्णुर्वषट्कारो भूतभव्यभवत्प्रभुः ।
भूतकृद भूतभृद्भावो भूतात्मा भूतभावनः ॥ 1 ॥

*1
विश्वं Full in all respects
Here at the outset, the all-round fullness and perfection of भगवान् is delineated by the word 'Visvam'. This word is derived from the root 'vis' to enter, with the addition of the 'kvan' suffix according to a grammatical rule, in the sense of 'He enters' (all the parts). In the मोक्ष-धर्म of महाभारतः, पञ्चशिक्ष explains this word 'विश्वं' to संयम as follows:-
" O the king of काशि They say भगवान् is 'विश्वं' because He enters all the words. O King! They also say that the worlds themselves are called " विश्वं".
It is propounded that भगवान् is perfect and full to the brim with

विश्वम्सर्वत्रपूर्णत्वात्स्वरूप-गुण-वैभवंः॥



1. श्रीपरवामुदेव

- We have linked certain content to other multi-lingual content, pictures etc
 - E.g: Sahasranama shloka linked to an English commentary and a picture

Other Content Hosted at Parankusa.org

- Articles
 - Research/Scholastic work

Documents

[Adivan Satavairi Gadyam](#)
[Vedic Chandas](#)
[Ramayanam \(Govindarajeeya Vyakhyanam\)](#)
[Parankusachar Institute of Vedic Studies \(PIVS\) - Recent Activities](#)
[Sapta Lakshanam\(1st Edition\)](#)
[Sadvimshati Sutra](#)
[Purna Kumbam](#)
[Vedanga Vyakaranam](#)
[HH 45th Azhagiyasingar 20 years \(Tamil Commentary\)](#)



- Audio/Video
 - Recordings of discourses

Download Recordings

Tiruppavai Upanyasam 2011-2012

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[Pasuram 2](#)
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[Pasuram 6](#)
[Pasuram 7](#)
[Pasuram 8](#)
[Pasuram 9](#)
[Pasuram 10](#)



- Generated Content
 - EG: Krama generated by batch program

[KrY Krama 1 1.pdf](#)
[KrY Krama 1 2.pdf](#)
[KrY Krama 1 3.pdf](#)
[KrY Krama 1 4.pdf](#)
[KrY Krama 1 5.pdf](#)
[KrY Krama 1 6.pdf](#)
[KrY Krama 1 7.pdf](#)
[KrY Krama 1 8.pdf](#)
[KrY Krama 2 1.pdf](#)
[KrY Krama 2 2.pdf](#)



- In-progress Research
 - Projects in the works

Structured Knowledge Store

What is

Description

Under the perspective of Vishistadvaitam, tatvam is an principle or element within reality
This is elucidated by the phrase "... विभक्तं नः तत्त्वत्रयं उपदिशन्ति..." which occurs in the work Rahasyatrayasaram [5.1.1]

Editor for Vedic Content Creation



Need for Vedic Content Editor

- Types of Digital Vedic Content being authored
 - Base text of the four Vedas
 - Vedanga works
 - Commentaries on the Vedas (Bhashya)
 - Classical works (Smritis, Sutras, Itihashas, Puranas, Kavyas, Stotras etc)
 - Modern works
- Issues with current content
 - Non-uniform in representation
 - Non-searchable formats
 - Without the full support of the Vedic accents
 - Isolated content

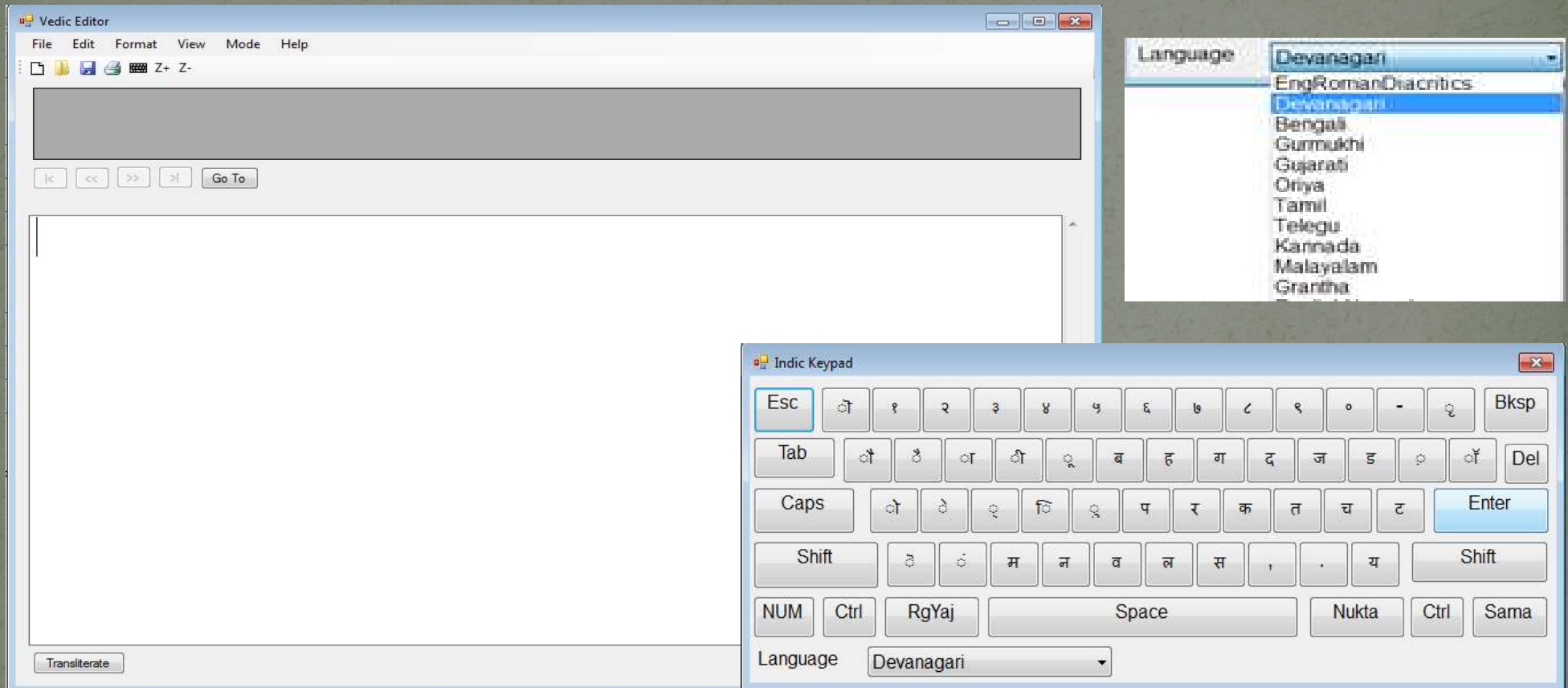
Desirable Features in Vedic Content Editor

- Basic Editing Features
- Unicode based character storage
- Support for Vedic Svaras and Grantha
- Virtual and physical keyboard
- Transliteration
- External Content Linking
- Structured Text
- Import and Export
- Cost

Gaps in Existing Tools

- Generic DTP Software
 - MS Office, Open Office etc.
 - Issues:
 - Stops at Indic support
- Indic Focused Software
 - ITRANS, Baraha
 - Issues
 - Basic svaras only, No structured content, Cant import from PCI
- Leap
 - Advanced support for Vedic
 - Issues
 - Proprietary to CDAC, Not Free
 - Not enhanced anymore, does not support newer operating systems
 - Rendering in Grantha and other formats not supported
 - Does not save in Unicode

Vedic Editor



- Developed in .NET
- Uses TSV files for paginated editing
- Indic languages, Nukta chars, Vedic svaras, Grantha

Features of the Vedic Editor

- Basic Editing Features
- Unicode based character storage
- Support for Vedic Svaras and Grantha
- Virtual and physical keyboard
- Transliteration
- External Content Linking
- Structured Text
- Import and Export
- It is free

Features of the Vedic Editor

- Demonstration