

Proposal to Encode Kirat Rai script in the Universal Character Set

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1 Introduction

This is a proposal to encode the Kirat Rai script in the Universal Character Set. Kirat Rai is used in Sikkim and West Bengal, India, for writing the Bantawa (Rai) language. It supersedes the following documents:

- N4037 [L2/11-145](#) Introducing the Kirat Rai Script. [7]
- N4018 [L2/11-105](#) Introducing the Khambu Rai Script. [8]
- [L2/21-132](#) Preliminary document towards advancing the Kirat Rai script. [5]

2 Background

2.1 Overview

The Bantawa (बान्तावा *bāntāwā*) language (ISO 639-3: bap) is a Tibeto-Burman language of the Kiranti family that is spoken in eastern Nepal, the state of Sikkim, and West Bengal of India. It is also known as An Yüŋ, Bantaba, Bantawa Dum, Bantawa Rai, Bantawa Yong, Bantawa Yüŋ, Bontawa, and Kirawa Yüŋ. The approximate number of total speakers of Bantawa throughout Nepal and India is 370,000 [18]. While Devanagari is used for writing Bantawa in Nepal, the Kirat Rai (𑅓𑅘𑅓𑅔𑅕𑅖𑅗𑅘𑅙𑅚𑅛𑅜𑅝𑅞𑅟𑅠𑅡𑅢𑅣𑅤𑅥𑅦𑅧𑅨𑅩𑅪𑅫𑅬𑅭𑅮𑅯𑅰𑅱𑅲𑅳𑅴𑅵𑅶𑅷𑅸𑅹𑅺𑅻𑅼𑅽𑅾𑅿𑆀𑆁𑆂𑆃𑆄𑆅𑆆𑆇𑆈𑆉𑆊𑆋𑆌𑆍𑆎𑆏𑆐𑆑𑆒𑆓𑆔𑆕𑆖𑆗𑆘𑆙𑆚𑆛𑆜𑆝𑆞𑆟𑆠𑆡𑆢𑆣𑆤𑆥𑆦𑆧𑆨𑆩𑆪𑆫𑆬𑆭𑆮𑆯𑆰𑆱𑆲𑆳𑆴𑆵𑆶𑆷𑆸𑆹𑆺𑆻𑆼𑆽𑆾𑆿𑇀𑇁𑇂𑇃𑇄𑇅𑇆𑇇𑇈𑇉𑇊𑇋𑇌𑇍𑇎𑇏𑇐𑇑𑇒𑇓𑇔𑇕𑇖𑇗𑇘𑇙𑇚𑇛𑇜𑇝𑇞𑇟𑇠𑇡𑇢𑇣𑇤𑇥𑇦𑇧𑇨𑇩𑇪𑇫𑇬𑇭𑇮𑇯𑇰𑇱𑇲𑇳𑇴𑇵𑇶𑇷𑇸𑇹𑇺𑇻𑇼𑇽𑇾𑇿𑈀𑈁𑈂𑈃𑈄𑈅𑈆𑈇𑈈𑈉𑈊𑈋𑈌𑈍𑈎𑈏𑈐𑈑𑈒𑈓𑈔𑈕𑈖𑈗𑈘𑈙𑈚𑈛𑈜𑈝𑈞𑈟𑈠𑈡𑈢𑈣𑈤𑈥𑈦𑈧𑈨𑈩𑈪𑈫𑈬𑈭𑈮𑈯𑈰𑈱𑈲𑈳𑈴𑈶𑈵𑈷𑈸𑈹𑈺𑈻𑈼𑈽𑈾𑈿𑉀𑉁𑉂𑉃𑉄𑉅𑉆𑉇𑉈𑉉𑉊𑉋𑉌𑉍𑉎𑉏𑉐𑉑𑉒𑉓𑉔𑉕𑉖𑉗𑉘𑉙𑉚𑉛𑉜𑉝𑉞𑉟𑉠𑉡𑉢𑉣𑉤𑉥𑉦𑉧𑉨𑉩𑉪𑉫𑉬𑉭𑉮𑉯𑉰𑉱𑉲𑉳𑉴𑉵𑉶𑉷𑉸𑉹𑉺𑉻𑉼𑉽𑉾𑉿𑊀𑊁𑊂𑊃𑊄𑊅𑊆𑊇𑊈𑊉𑊊𑊋𑊌𑊍𑊎𑊏𑊐𑊑𑊒𑊓𑊔𑊕𑊖𑊗𑊘𑊙𑊚𑊛𑊜𑊝𑊞𑊟𑊠𑊡𑊢𑊣𑊤𑊥𑊦𑊧𑊨𑊩𑊪𑊫𑊬𑊭𑊮𑊯𑊰𑊱𑊲𑊳𑊴𑊵𑊶𑊷𑊸𑊹𑊺𑊻𑊼𑊽𑊾𑊿𑋀𑋁𑋂𑋃𑋄𑋅𑋆𑋇𑋈𑋉𑋊𑋋𑋌𑋍𑋎𑋏𑋐𑋑𑋒𑋓𑋔𑋕𑋖𑋗𑋘𑋙𑋚𑋛𑋜𑋝𑋞𑋟𑋠𑋡𑋢𑋣𑋤𑋥𑋦𑋧𑋨𑋩𑋪𑋫𑋬𑋭𑋮𑋯𑋰𑋱𑋲𑋳𑋴𑋵𑋶𑋷𑋸𑋹𑋺𑋻𑋼𑋽𑋾𑋿𑌀𑌁𑌂𑌃𑌄𑌅𑌆𑌇𑌈𑌉𑌊𑌋𑌌𑌍𑌎𑌏𑌐𑌑𑌒𑌓𑌔𑌕𑌖𑌗𑌘𑌙𑌚𑌛𑌜𑌝𑌞𑌟𑌠𑌡𑌢𑌣𑌤𑌥𑌦𑌧𑌨𑌩𑌪𑌫𑌬𑌭𑌮𑌯𑌰𑌱𑌲𑌳𑌴𑌵𑌶𑌷𑌸𑌹𑌺𑌻𑌼𑌽𑌾𑌿𑍀𑍁𑍂𑍃𑍄𑍅𑍆𑍇𑍈𑍉𑍊𑍋𑍌𑍍𑍎𑍏𑍐𑍑𑍒𑍓𑍔𑍕𑍖𑍗𑍘𑍙𑍚𑍛𑍜𑍝𑍞𑍟𑍠𑍡𑍢𑍣𑍤𑍥𑍦𑍧𑍨𑍩𑍪𑍫𑍬𑍭𑍮𑍯𑍰𑍱𑍲𑍳𑍴𑍵𑍶𑍷𑍸𑍹𑍺𑍻𑍼𑍽𑍾𑍿𑎀𑎁𑎂𑎃𑎄𑎅𑎆𑎇𑎈𑎉𑎊𑎋𑎌𑎍𑎎𑎏𑎐𑎑𑎒𑎓𑎔𑎕𑎖𑎗𑎘𑎙𑎚𑎛𑎜𑎝𑎞𑎟𑎠𑎡𑎢𑎣𑎤𑎥𑎦𑎧𑎨𑎩𑎪𑎫𑎬𑎭𑎮𑎯𑎰𑎱𑎲𑎳𑎴𑎵𑎶𑎷𑎸𑎹𑎺𑎻𑎼𑎽𑎾𑎿𑏀𑏁𑏂𑏃𑏄𑏅𑏆𑏇𑏈𑏉𑏊𑏋𑏌𑏍𑏎𑏏𑏐𑏑𑏒𑏓𑏔𑏕𑏖𑏗𑏘𑏙𑏚𑏛𑏜𑏝𑏞𑏟𑏠𑏡𑏢𑏣𑏤𑏥𑏦𑏧𑏨𑏩𑏪𑏫𑏬𑏭𑏮𑏯𑏰𑏱𑏲𑏳𑏴𑏵𑏶𑏷𑏸𑏹𑏺𑏻𑏼𑏽𑏾𑏿𑐀𑐁𑐂𑐃𑐄𑐅𑐆𑐇𑐈𑐉𑐊𑐋𑐌𑐍𑐎𑐏𑐐𑐑𑐒𑐓𑐔𑐕𑐖𑐗𑐘𑐙𑐚𑐛𑐜𑐝𑐞𑐟𑐠𑐡𑐢𑐣𑐤𑐥𑐦𑐧𑐨𑐩𑐪𑐫𑐬𑐭𑐮𑐯𑐰𑐱𑐲𑐳𑐴𑐵𑐶𑐷𑐸𑐹𑐺𑐻𑐼𑐽𑐾𑐿𑑀𑑁𑑂𑑃𑑄𑑅𑑆𑑇𑑈𑑉𑑊𑑋𑑌𑑍𑑎𑑏𑑐𑑑𑑒𑑓𑑔𑑕𑑖𑑗𑑘𑑙𑑚𑑛𑑜𑑝𑑞𑑟𑑠𑑡𑑢𑑣𑑤𑑥𑑦𑑧𑑨𑑩𑑪𑑫𑑬𑑭𑑮𑑯𑑰𑑱𑑲𑑳𑑴𑑵𑑶𑑷𑑸𑑹𑑺𑑻𑑼𑑽𑑾𑑿𑒀𑒁𑒂𑒃𑒄𑒅𑒆𑒇𑒈𑒉𑒊𑒋𑒌𑒍𑒎𑒏𑒐𑒑𑒒𑒓𑒔𑒕𑒖𑒗𑒘𑒙𑒚𑒛𑒜𑒝𑒞𑒟𑒠𑒡𑒢𑒣𑒤𑒥𑒦𑒧𑒨𑒩𑒪𑒫𑒬𑒭𑒮𑒯𑒰𑒱𑒲𑒳𑒴𑒵𑒶𑒷𑒸𑒻𑒻𑒼𑒽𑒾𑒿𑓀𑓁𑓃𑓂𑓄𑓅𑓆𑓇𑓈𑓉𑓊𑓋𑓌𑓍𑓎𑓏𑓐𑓑𑓒𑓓𑓔𑓕𑓖𑓗𑓘𑓙𑓚𑓛𑓜𑓝𑓞𑓟𑓠𑓡𑓢𑓣𑓤𑓥𑓦𑓧𑓨𑓩𑓪𑓫𑓬𑓭𑓮𑓯𑓰𑓱𑓲𑓳𑓴𑓵𑓶𑓷𑓸𑓹𑓺𑓻𑓼𑓽𑓾𑓿𑔀𑔁𑔂𑔃𑔄𑔅𑔆𑔇𑔈𑔉𑔊𑔋𑔌𑔍𑔎𑔏𑔐𑔑𑔒𑔓𑔔𑔕𑔖𑔗𑔘𑔙𑔚𑔛𑔜𑔝𑔞𑔟𑔠𑔡𑔢𑔣𑔤𑔥𑔦𑔧𑔨𑔩𑔪𑔫𑔬𑔭𑔮𑔯𑔰𑔱𑔲𑔳𑔴𑔵𑔶𑔷𑔸𑔹𑔺𑔻𑔼𑔽𑔾𑔿𑕀𑕁𑕂𑕃𑕄𑕅𑕆𑕇𑕈𑕉𑕊𑕋𑕌𑕍𑕎𑕏𑕐𑕑𑕒𑕓𑕔𑕕𑕖𑕗𑕘𑕙𑕚𑕛𑕜𑕝𑕞𑕟𑕠𑕡𑕢𑕣𑕤𑕥𑕦𑕧𑕨𑕩𑕪𑕫𑕬𑕭𑕮𑕯𑕰𑕱𑕲𑕳𑕴𑕵𑕶𑕷𑕸𑕹𑕺𑕻𑕼𑕽𑕾𑕿𑖀𑖁𑖂𑖃𑖄𑖅𑖆𑖇𑖈𑖉𑖊𑖋𑖌𑖍𑖎𑖏𑖐𑖑𑖒𑖓𑖔𑖕𑖖𑖗𑖘𑖙𑖚𑖛𑖜𑖝𑖞𑖟𑖠𑖡𑖢𑖣𑖤𑖥𑖦𑖧𑖨𑖩𑖪𑖫𑖬𑖭𑖮𑖯𑖰𑖱𑖲𑖳𑖴𑖵𑖶𑖷𑖸𑖹𑖺𑖻𑖼𑖽𑖾𑗀𑖿𑗁𑗂𑗃𑗄𑗅𑗆𑗇𑗈𑗉𑗊𑗋𑗌𑗍𑗎𑗏𑗐𑗑𑗒𑗓𑗔𑗕𑗖𑗗𑗘𑗙𑗚𑗛𑗜𑗝𑗞𑗟𑗠𑗡𑗢𑗣𑗤𑗥𑗦𑗧𑗨𑗩𑗪𑗫𑗬𑗭𑗮𑗯𑗰𑗱𑗲𑗳𑗴𑗵𑗶𑗷𑗸𑗹𑗺𑗻𑗼𑗽𑗾𑗿𑘀𑘁𑘂𑘃𑘄𑘅𑘆𑘇𑘈𑘉𑘊𑘋𑘌𑘍𑘎𑘏𑘐𑘑𑘒𑘓𑘔𑘕𑘖𑘗𑘘𑘙𑘚𑘛𑘜𑘝𑘞𑘟𑘠𑘡𑘢𑘣𑘤𑘥𑘦𑘧𑘨𑘩𑘪𑘫𑘬𑘭𑘮𑘯𑘰𑘱𑘲𑘳𑘴𑘵𑘶𑘷𑘸𑘹𑘺𑘻𑘼𑘽𑘾𑘿𑙀𑙁𑙂𑙃𑙄𑙅𑙆𑙇𑙈𑙉𑙊𑙋𑙌𑙍𑙎𑙏𑙐𑙑𑙒𑙓𑙔𑙕𑙖𑙗𑙘𑙙𑙚𑙛𑙜𑙝𑙞𑙟𑙠𑙡𑙢𑙣𑙤𑙥𑙦𑙧𑙨𑙩𑙪𑙫𑙬𑙭𑙮𑙯𑙰𑙱𑙲𑙳𑙴𑙵𑙶𑙷𑙸𑙹𑙺𑙻𑙼𑙽𑙾𑙿𑚀𑚁𑚂𑚃𑚄𑚅𑚆𑚇𑚈𑚉𑚊𑚋𑚌𑚍𑚎𑚏𑚐𑚑𑚒𑚓𑚔𑚕𑚖𑚗𑚘𑚙𑚚𑚛𑚜𑚝𑚞𑚟𑚠𑚡𑚢𑚣𑚤𑚥𑚦𑚧𑚨𑚩𑚪𑚫𑚬𑚭𑚮𑚯𑚰𑚱𑚲𑚳𑚴𑚵𑚷𑚶𑚸𑚹𑚺𑚻𑚼𑚽𑚾𑚿𑛀𑛁𑛂𑛃𑛄𑛅𑛆𑛇𑛈𑛉𑛊𑛋𑛌𑛍𑛎𑛏𑛐𑛑𑛒𑛓𑛔𑛕𑛖𑛗𑛘𑛙𑛚𑛛𑛜𑛝𑛞𑛟𑛠𑛡𑛢𑛣𑛤𑛥𑛦𑛧𑛨𑛩𑛪𑛫𑛬𑛭𑛮𑛯𑛰𑛱𑛲𑛳𑛴𑛵𑛶𑛷𑛸𑛹𑛺𑛻𑛼𑛽𑛾𑛿𑜀𑜁𑜂𑜃𑜄𑜅𑜆𑜇𑜈𑜉𑜊𑜋𑜌𑜍𑜎𑜏𑜐𑜑𑜒𑜓𑜔𑜕𑜖𑜗𑜘𑜙𑜚𑜛𑜜𑜝𑜞𑜟𑜠𑜡𑜢𑜣𑜤𑜥𑜦𑜧𑜨𑜩𑜪𑜫𑜬𑜭𑜮𑜯𑜰𑜱𑜲𑜳𑜴𑜵𑜶𑜷𑜸𑜹𑜺𑜻𑜼𑜽𑜾𑜿𑝀𑝁𑝂𑝃𑝄𑝅𑝆𑝇𑝈𑝉𑝊𑝋𑝌𑝍𑝎𑝏𑝐𑝑𑝒𑝓𑝔𑝕𑝖𑝗𑝘𑝙𑝚𑝛𑝜𑝝𑝞𑝟𑝠𑝡𑝢𑝣𑝤𑝥𑝦𑝧𑝨𑝩𑝪𑝫𑝬𑝭𑝮𑝯𑝰𑝱𑝲𑝳𑝴𑝵𑝶𑝷𑝸𑝹𑝺𑝻𑝼𑝽𑝾𑝿𑞀𑞁𑞂𑞃𑞄𑞅𑞆𑞇𑞈𑞉𑞊𑞋𑞌𑞍𑞎𑞏𑞐𑞑𑞒𑞓𑞔𑞕𑞖𑞗𑞘𑞙𑞚𑞛𑞜𑞝𑞞𑞟𑞠𑞡𑞢𑞣𑞤𑞥𑞦𑞧𑞨𑞩𑞪𑞫𑞬𑞭𑞮𑞯𑞰𑞱𑞲𑞳𑞴𑞵𑞶𑞷𑞸𑞹𑞺𑞻𑞼𑞽𑞾𑞿𑟀𑟁𑟂𑟃𑟄𑟅𑟆𑟇𑟈𑟉𑟊𑟋𑟌𑟍𑟎𑟏𑟐𑟑𑟒𑟓𑟔𑟕𑟖𑟗𑟘𑟙𑟚𑟛𑟜𑟝𑟞𑟟𑟠𑟡𑟢𑟣𑟤𑟥𑟦𑟧𑟨𑟩𑟪𑟫𑟬𑟭𑟮𑟯𑟰𑟱𑟲𑟳𑟴𑟵𑟶𑟷𑟸𑟹𑟺𑟻𑟼𑟽𑟾𑟿𑠀𑠁𑠂𑠃𑠄𑠅𑠆𑠇𑠈𑠉𑠊𑠋𑠌𑠍𑠎𑠏𑠐𑠑𑠒𑠓𑠔𑠕𑠖𑠗𑠘𑠙𑠚𑠛𑠜𑠝𑠞𑠟𑠠𑠡𑠢𑠣𑠤𑠥𑠦𑠧𑠨𑠩𑠪𑠫𑠬𑠭𑠮𑠯𑠰𑠱𑠲𑠳𑠴𑠵𑠶𑠷𑠸𑠺𑠹𑠻𑠼𑠽𑠾𑠿𑡀𑡁𑡂𑡃𑡄𑡅𑡆𑡇𑡈𑡉𑡊𑡋𑡌𑡍𑡎𑡏𑡐𑡑𑡒𑡓𑡔𑡕𑡖𑡗𑡘𑡙𑡚𑡛𑡜𑡝𑡞𑡟𑡠𑡡𑡢𑡣𑡤𑡥𑡦𑡧𑡨𑡩𑡪𑡫𑡬𑡭𑡮𑡯𑡰𑡱𑡲𑡳𑡴𑡵𑡶𑡷𑡸𑡹𑡺𑡻𑡼𑡽𑡾𑡿𑢀𑢁𑢂𑢃𑢄𑢅𑢆𑢇𑢈𑢉𑢊𑢋𑢌𑢍𑢎𑢏𑢐𑢑𑢒𑢓𑢔𑢕𑢖𑢗𑢘𑢙𑢚𑢛𑢜𑢝𑢞𑢟𑢠𑢡𑢢𑢣𑢤𑢥𑢦𑢧𑢨𑢩𑢪𑢫𑢬𑢭𑢮𑢯𑢰𑢱𑢲𑢳𑢴𑢵𑢶𑢷𑢸𑢹𑢺𑢻𑢼𑢽𑢾𑢿𑣀𑣁𑣂𑣃𑣄𑣅𑣆𑣇𑣈𑣉𑣊𑣋𑣌𑣍𑣎𑣏𑣐𑣑𑣒𑣓𑣔𑣕𑣖𑣗𑣘𑣙𑣚𑣛𑣜𑣝𑣞𑣟𑣠𑣡𑣢𑣣𑣤𑣥𑣦𑣧𑣨𑣩𑣪𑣫𑣬𑣭𑣮𑣯𑣰𑣱𑣲𑣳𑣴𑣵𑣶𑣷𑣸𑣹𑣺𑣻𑣼𑣽𑣾𑣿𑤀𑤁𑤂𑤃𑤄𑤅𑤆𑤇𑤈𑤉𑤊𑤋𑤌𑤍𑤎𑤏𑤐𑤑𑤒𑤓𑤔𑤕𑤖𑤗𑤘𑤙𑤚𑤛𑤜𑤝𑤞𑤟𑤠𑤡𑤢𑤣𑤤𑤥𑤦𑤧𑤨𑤩𑤪𑤫𑤬𑤭𑤮𑤯𑤰𑤱𑤲𑤳𑤴𑤵𑤶𑤷𑤸𑤹𑤺𑤻𑤼𑤽𑤾𑤿𑥀𑥁𑥂𑥃𑥄𑥅𑥆𑥇𑥈𑥉𑥊𑥋𑥌𑥍𑥎𑥏𑥐𑥑𑥒𑥓𑥔𑥕𑥖𑥗𑥘𑥙𑥚𑥛𑥜𑥝𑥞𑥟𑥠𑥡𑥢𑥣𑥤𑥥𑥦𑥧𑥨𑥩𑥪𑥫𑥬𑥭𑥮𑥯𑥰𑥱𑥲𑥳𑥴𑥵𑥶𑥷𑥸𑥹𑥺𑥻𑥼𑥽𑥾𑥿𑦀𑦁𑦂𑦃𑦄𑦅𑦆𑦇𑦈𑦉𑦊𑦋𑦌𑦍𑦎𑦏𑦐𑦑𑦒𑦓𑦔𑦕𑦖𑦗𑦘𑦙𑦚𑦛𑦜𑦝𑦞𑦟𑦠𑦡𑦢𑦣𑦤𑦥𑦦𑦧𑦨𑦩𑦪𑦫𑦬𑦭𑦮𑦯𑦰𑦱𑦲𑦳𑦴𑦵𑦶𑦷𑦸𑦹𑦺𑦻𑦼𑦽𑦾𑦿𑧀𑧁𑧂𑧃𑧄𑧅𑧆𑧇𑧈𑧉𑧊𑧋𑧌𑧍𑧎𑧏𑧐𑧑𑧒𑧓𑧔𑧕𑧖𑧗𑧘𑧙𑧚𑧛𑧜𑧝𑧞𑧟𑧠𑧡𑧢𑧣𑧤𑧥𑧦𑧧𑧨𑧩𑧪𑧫𑧬𑧭𑧮𑧯𑧰𑧱𑧲𑧳𑧴𑧵𑧶𑧷𑧸𑧹𑧺𑧻𑧼𑧽𑧾𑧿𑨀𑨁𑨂𑨃𑨄𑨅𑨆𑨇𑨈𑨉𑨊𑨋𑨌𑨍𑨎𑨏𑨐𑨑𑨒𑨓𑨔𑨕𑨖𑨗𑨘𑨙𑨚𑨛𑨜𑨝𑨞𑨟𑨠𑨡𑨢𑨣𑨤𑨥𑨦𑨧𑨨𑨩𑨪𑨫𑨬𑨭𑨮𑨯𑨰𑨱𑨲𑨳𑨴𑨵𑨶𑨷𑨸𑨹𑨺𑨻𑨼𑨽𑨾𑨿𑩀𑩁𑩂𑩃𑩄𑩅𑩆𑩇𑩈𑩉𑩊𑩋𑩌𑩍𑩎𑩏𑩐𑩑𑩒𑩓𑩔𑩕𑩖𑩗𑩘𑩙𑩚𑩛𑩜𑩝𑩞𑩟𑩠𑩡𑩢𑩣𑩤𑩥𑩦𑩧𑩨𑩩𑩪𑩫𑩬𑩭𑩮𑩯𑩰𑩱𑩲𑩳𑩴𑩵𑩶𑩷𑩸𑩹𑩺𑩻𑩼𑩽𑩾𑩿𑪀𑪁𑪂𑪃𑪄𑪅𑪆𑪇𑪈𑪉𑪊𑪋𑪌𑪍𑪎𑪏𑪐𑪑𑪒𑪓𑪔𑪕𑪖𑪗𑪘𑪙𑪚𑪛𑪜𑪝𑪞𑪟𑪠𑪡𑪢𑪣𑪤𑪥𑪦𑪧𑪨𑪩𑪪𑪫𑪬𑪭𑪮𑪯𑪰𑪱𑪲𑪳𑪴𑪵𑪶𑪷𑪸𑪹𑪺𑪻𑪼𑪽𑪾𑪿𑫀𑫁𑫂𑫃𑫄𑫅𑫆𑫇𑫈𑫉𑫊𑫋𑫌𑫍𑫎𑫏𑫐𑫑𑫒𑫓𑫔𑫕𑫖𑫗𑫘𑫙𑫚𑫛𑫜𑫝𑫞𑫟𑫠𑫡𑫢𑫣𑫤𑫥𑫦𑫧𑫨𑫩𑫪𑫫𑫬𑫭𑫮𑫯𑫰𑫱𑫲𑫳𑫴𑫵𑫶𑫷𑫸𑫹𑫺𑫻𑫼𑫽𑫾𑫿𑬀𑬁𑬂𑬃𑬄𑬅𑬆𑬇𑬈𑬉𑬊𑬋𑬌𑬍𑬎𑬏𑬐𑬑𑬒𑬓𑬔𑬕𑬖𑬗𑬘𑬙𑬚𑬛𑬜𑬝𑬞𑬟𑬠𑬡𑬢𑬣𑬤𑬥𑬦𑬧𑬨𑬩𑬪𑬫𑬬𑬭𑬮𑬯𑬰𑬱𑬲𑬳𑬴𑬵𑬶𑬷𑬸𑬹𑬺𑬻𑬼𑬽𑬾𑬿𑭀𑭁𑭂𑭃𑭄𑭅𑭆𑭇𑭈𑭉𑭊𑭋𑭌𑭍𑭎𑭏𑭐𑭑𑭒𑭓𑭔𑭕𑭖𑭗𑭘𑭙𑭚𑭛𑭜𑭝𑭞𑭟𑭠𑭡𑭢𑭣𑭤𑭥𑭦𑭧𑭨𑭩𑭪𑭫𑭬𑭭𑭮𑭯𑭰𑭱𑭲𑭳𑭴𑭵𑭶𑭷𑭸𑭹𑭺𑭻𑭼𑭽𑭾𑭿𑮀𑮁𑮂𑮃𑮄𑮅𑮆𑮇𑮈𑮉𑮊𑮋𑮌𑮍𑮎𑮏𑮐𑮑𑮒𑮓𑮔𑮕𑮖𑮗𑮘𑮙𑮚𑮛𑮜𑮝𑮞𑮟𑮠𑮡𑮢𑮣𑮤𑮥𑮦𑮧𑮨𑮩𑮪𑮫𑮬𑮭𑮮𑮯𑮰𑮱𑮲𑮳𑮴𑮵𑮶𑮷𑮸𑮹𑮺𑮻𑮼𑮽𑮾𑮿𑯀𑯁𑯂𑯃𑯄𑯅𑯆𑯇𑯈𑯉𑯊𑯋𑯌𑯍𑯎𑯏𑯐𑯑𑯒𑯓𑯔𑯕𑯖𑯗𑯘𑯙𑯚𑯛𑯜𑯝𑯞𑯟𑯠𑯡𑯢𑯣𑯤𑯥𑯦𑯧𑯨𑯩𑯪𑯫𑯬𑯭𑯮𑯯𑯰𑯱𑯲𑯳𑯴𑯵𑯶𑯷𑯸𑯹𑯺𑯻𑯼𑯽𑯾𑯿𑰀𑰁𑰂𑰃𑰄𑰅𑰆𑰇𑰈𑰉𑰊𑰋𑰌𑰍𑰎𑰏𑰐𑰑𑰒𑰓𑰔𑰕𑰖𑰗𑰘𑰙𑰚𑰛𑰜𑰝𑰞𑰟𑰠𑰡𑰢𑰣𑰤𑰥𑰦𑰧𑰨𑰩𑰪𑰫𑰬𑰭𑰮𑰯𑰰𑰱𑰲𑰳𑰴𑰵𑰶𑰷𑰸𑰹𑰺𑰻𑰼𑰽𑰾𑰿𑱀𑱁𑱂𑱃𑱄𑱅𑱆𑱇𑱈𑱉𑱊𑱋𑱌𑱍𑱎𑱏𑱐𑱑𑱒𑱓𑱔𑱕𑱖𑱗𑱘𑱙𑱚𑱛𑱜𑱝𑱞𑱟𑱠𑱡𑱢𑱣𑱤𑱥𑱦𑱧𑱨𑱩𑱪𑱫𑱬𑱭𑱮𑱯𑱰𑱱𑱲𑱳𑱴𑱵𑱶𑱷𑱸𑱹𑱺𑱻𑱼𑱽𑱾𑱿𑲀𑲁𑲂𑲃𑲄𑲅𑲆𑲇𑲈𑲉𑲊𑲋𑲌𑲍𑲎𑲏𑲐𑲑𑲒𑲓𑲔𑲕𑲖𑲗𑲘𑲙𑲚𑲛𑲜𑲝𑲞𑲟𑲠𑲡𑲢𑲣𑲤𑲥𑲦𑲧𑲨𑲩𑲪𑲫𑲬𑲭

Table 4 for a comparison of Kirat Rai and Limbu scripts. In 1969, Guru Kripasalyan Rai of West Sikkim reintroduced and popularized that script as '*Kripasalyan Lipi*' by publishing his book '*Rāī Akṣarko Barnamālā*'.

In 1995, the Sikkim Legislative Assembly passed Bill and included Bantawa language as Official Language of the State along with Nepali, Bhutia, Lepcha and Limbu. In the Bill the Bantawa language is referred to as ‘Rai’ language. In 1996, the Bantawa language was recognized as the lingua franca among the Kirat Rai people of the Sikkim State in the annual meeting of the *Akhil Kirat Rai Sangh Sikkim*. In 1998, *Khambu Rai* script (L2/11-105) was adopted as the official script of Kirat Rai until 1999. In 2000, a team under the leadership of Bhakta Bahadur Rai and B.B. Rokdung Rai reshaped the glyphs and redesigned the *Khambu Rai* script into the current *Kirat Rai* script (L2/11-145) taking into account orthographical, phonological, and printing issues, etc. They removed some redundant letters after phonological analysis. They reshaped all the diacritics and added some extra signs and a vowel. The comparison of these scripts can be seen in Table 3.

Since 2000, the *Kirat Rai* script has remained stable and is still used as the official script for the Kirat Rai language (in India) and the *Khambu Rai* script is no longer in use. The first ever computer font was created by Bikram Rai in 2000 which is used in this proposal. Kirat Rai script is also called ‘Khambu Rai Lipi’ in West Bengal [2]. In January 2003 two textbooks, *Rāi Chāmārī Lāchep* རླུང་གི་ལོ་རྒྱུད་ (Rai alphabet textbook) for primary class and *Rāi Yan Chāpalāyāk-Busī Dak* རླུང་གི་ཡན་ཤེས་པའི་བཀའ་བྲལ་ (for class I) have been printed by the AKRS. (see Figures 20-28) [9].

2.2 Usage

The Kirat Rai script is currently used in writing and print for various purposes:

- **Educational Materials:** Primary educational materials for teaching Bantawa and Kirat Rai are published by Govt. of Sikkim. Examples of script primers are ཨོཾཤུལ་ཆེན་ཨོཾཤུལ་ *Hopchāp-Cāichāp* (2021), ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ *Ān Yañ-o Chāpbopcañ* (2019), ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ *Yāyātum* (2021) and ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ *Ān Chāplābop* (2021). The Department of Education of the Government of Sikkim is publishing Bantawa Rai school textbooks up to upper secondary level education. Central Board of Secondary Education is conducting Board examination for Rai (Bantawa) every year. (see Fig.12) [3]
- **Literary Works:** Bantawa poetry ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ཆེན་ *Sāvāyīnsā Sīnpāsin* and novel ཨོཾཤུལ་ཆེན་ *Summit* are printed in this script.
- **Newspapers:** A Bantawa (‘Rai’) edition of the *Sikkim Herald* (ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ཆེན་) is produced in Kirat Rai. The newspaper was first published in 2000 and maintains an active circulation (see Fig.13). The first edition was written by Bhakta B. Rai. Now editions are written by Prabhat Shiwahang Rai [16].
- **Linguistic Works:** Grammar book of Bantawa for elementary level i.e. ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ཆེན་ *Rāi Yañō Sāseñayan* (2011) by Prabhat Shiwahang Rai (see Fig.15) and Nepali-Rai Dictionary i.e. ཨོཾཤུལ་ཆེན་ ཨོཾཤུལ་ཆེན་ *Nepālī-Rāi Citramay Śabdakoś* by B.B.Rokdung written in this script (see Fig.14). [15]
- **Government Records:** Proceedings of the Sikkim legislative assembly are translated into Bantawa using the script.
- **Academic Works:** The script is used in several scholarly works on the Bantawa language and it is also the focus of scholarly attention.
- **Ephemera:** West Bengal Khambu Rai Development Board, Darjeeling produces and distributes Kirat Rai Chart (see Fig 5a & 5b).
- **Digital Resources:** Kirat Rai has been adapted for use in digital media. A digitized font for the script named ‘Kirat Rai font’ was developed by Bikram Rai. It is based upon a non-Unicode encoding and is mapped to Latin letters. The font is used for publishing the *Sikkim Herald* [16] and by CBSE [3] in their question paper.

3 Writing System

3.1 Script Name

The original proposal documents were for two scripts: Kirat Rai and Khambu Rai. It has also been called ‘Kirat’ or ‘Rai’. ‘Rai’ would be too generic a name for the script as that term is widely used even with last names of individuals in the region. We suggest ‘Kirat Rai’ (most commonly used) or ‘Kirat Khambu Rai’ as the name for the script. ‘Kirat Rai’ is used in this document. The proposed characters are intended for representing historical and current forms of Kirat Rai.

3.2 Structure

Kirat Rai is an alpha syllabic writing system based on a simplified Brahmi model. It is written from left to right. The script does not have the rendering complexity of traditional Brahmic scripts (no reordering, no combining marks, and no conjuncts). Consonants may have an inherent vowel; it typically is pronounced [a] or [ʌ], normally never occurs in final position. The script has no system of conjuncts but it has *virama* and *saat* to mute the inherent vowel [§3.6.1]. There is a vowel letter which functions as a vowel carrier.

The set consists of 58 characters: 1 independent vowel, 31 consonants, 8 vowels, 6 other signs, 2 punctuation marks, and 10 digits.

There is absence of *letter nna* and *letter ssa* in Kirat Rai as per Brahmi model. In L2/11-145, the letter *SA* was placed after *SHA* per the normal Brahmi model. This proposal places the letter *SA* before the letter *SHA* as this is the order used in Kirat Rai (see Fig. 3).

3.3 Independent Vowel

There is a single vowel letter which functions as a vowel carrier. Other vowels are represented as dependent signs (see Fig. 1, 5a, 6, 7, 10). Independent forms of other vowels are produced by writing those vowels with this letter.

letter	Name of the character
𑒧	KIRAT RAI LETTER A

3.4 Consonants

There are 31 consonants. Two of the consonants are not always included in the alphabet charts (see Fig. 4, 6). These are KIRAT RAI LETTER NYA and KIRAT RAI LETTER SHA. However, there certainly is evidence of usage in many of the charts and school books (see Fig. 3, 5b, 10, 24, 25). KIRAT RAI LETTER NYA (see Fig. 3, 4, 5b, 10, 24) and KIRAT RAI LETTER DDHA (see Fig. 3, 4, 5b, 6, 9, 10, 25) are difficult to find in running text (these sounds may not occur in Bantawa, but they are likely used for borrowed words). They are however, taught in the school books referenced. Thus, all of these should be encoded:

letter	Name of the character
𑌀	KIRAT RAI LETTER KA
𑌁	KIRAT RAI LETTER KHA
𑌂	KIRAT RAI LETTER GA
𑌃	KIRAT RAI LETTER GHA
𑌄	KIRAT RAI LETTER NGA
𑌅	KIRAT RAI LETTER CA
𑌆	KIRAT RAI LETTER CHA
𑌇	KIRAT RAI LETTER JA
𑌈	KIRAT RAI LETTER JHA
𑌉	KIRAT RAI LETTER NYA
𑌊	KIRAT RAI LETTER TTA
𑌋	KIRAT RAI LETTER TTHA
𑌌	KIRAT RAI LETTER DDA
𑌍	KIRAT RAI LETTER DDHA
𑌎	KIRAT RAI LETTER TA
𑌏	KIRAT RAI LETTER THA
𑌐	KIRAT RAI LETTER DA
𑌑	KIRAT RAI LETTER DHA
𑌒	KIRAT RAI LETTER NA
𑌓	KIRAT RAI LETTER PA
𑌔	KIRAT RAI LETTER PHA
𑌕	KIRAT RAI LETTER BA
𑌖	KIRAT RAI LETTER BHA
𑌗	KIRAT RAI LETTER MA
𑌘	KIRAT RAI LETTER YA
𑌙	KIRAT RAI LETTER RA
𑌚	KIRAT RAI LETTER LA
𑌛	KIRAT RAI LETTER VA
𑌜	KIRAT RAI LETTER SA
𑌝	KIRAT RAI LETTER SHA
𑌞	KIRAT RAI LETTER HA

3.5 Vowel Signs

There are 8 “dependent” vowels (see Fig. 1, 5a, 6, 7, 10, 22):

letter	name of the character
	KIRAT RAI VOWEL SIGN AA
∟	KIRAT RAI VOWEL SIGN I
∪	KIRAT RAI VOWEL SIGN U
∪̣	KIRAT RAI VOWEL SIGN UE
Ɔ	KIRAT RAI VOWEL SIGN E
ƆƆ	KIRAT RAI VOWEL SIGN AI
∪̣̣	KIRAT RAI VOWEL SIGN O
∪̣̣̣	KIRAT RAI VOWEL SIGN AU

These vowel signs can be used with KIRAT RAI LETTER A or with consonants. For example, a+au (∪̣̣̣) or pa+au (pa∪̣̣̣) are used.

These should all be encoded atomically. This is because linguistically these vowels are not composed of two separate characters, they are single vowels in their own right. It is true that the custom encoded Kirat Rai font uses decomposed vowel signs as a matter of expediency, but this decision should not influence the right way to encode the script. Because the glyph for some of the vowels (aa and e) are part of the shape of the last 3 vowels (ai, o, au) there should be canonical decompositions for the last 3 vowels. With these decompositions, Do Not Use tables are not necessary.

Following the similar **New Tai Lue** vowel sign names, these are called “VOWEL SIGN”. **New Tai Lue** also gives these the General Category of “Lo” (Other_Letter).

3.5.1 VOWEL SIGN UE <U>

This proposal includes KIRAT RAI VOWEL SIGN UE which was not included in L2/11-145. It represents central unrounded closed phoneme *ü* [i]. Bantawa language does have this unique type of phoneme in comparison to other Kiranti languages. It is represented in Devanagari with ङ and sometimes by ङ. For examples:

ᱵᱤ ᱠᱤ ᱵᱤᱨ ᱵᱤᱨ ‘Blood’ and ᱵᱤ ᱠᱤ ᱵᱤᱨ ‘Snake’, etc.

Because this is a separate vowel, and because the circle is usually positioned above the loop (See Fig. 5a, 10, 28), there should not be an attempt to encode this as *vowel sign u* plus *sign yupi*.

See Fig. 1, 5a, 10, 17d, 28.

3.6 Various Signs

There are 6 various signs. This proposal includes the *virama* proposed in L2/11-145. The name for *candrabindu* was changed to *anusvara* (as discussed in 3.6.2) and adds four more signs as discussed below (see Fig. 10):

letter	name of the character
°	KIRAT RAI SIGN ANUSVARA
˙	KIRAT RAI SIGN TONPI
˘	KIRAT RAI SIGN VISARGA
-	KIRAT RAI SIGN VIRAMA
^	KIRAT RAI SIGN SAAT
°	KIRAT RAI SIGN YUPI

Because the Kirat Rai Signs are all visually on the baseline, and the modifier letters that were similar are mostly below the baseline, it seems best to encode these in the Kirat Rai block. This will mean there will not be font fallback issues.

The spacing signs, VIRAMA, ANUSVARA, TONPI, VISARGA, and SAAT could be assigned a General Category of “Lm” (Modifier_Letter) or of “Lo” (Other_Letter). Because these characters have the appearance of modifier letters, we have used “Lm”. Examples of other characters using “Lm”:

```
0559;ARMENIAN MODIFIER LETTER LEFT HALF RING;Lm;0;L;;;;N;;;;;
06E5;ARABIC SMALL WAW;Lm;0;AL;;;;N;;;;;
07FA;NKO LAJANYALAN;Lm;0;R;;;;N;;;;;
1C7A;OL CHIKI MU-GAAHLAA TTUDDAAG;Lm;0;L;;;;N;;;;;
```

Following 0970 DEVANAGARI ABBREVIATION SIGN, YUPI has been assigned a General Category of “Po” (Other_Punctuation).

3.6.1 Difference between Sign Anusvara <̣> and Sign Tonpi <̣̣>

SIGN ANUSVARA <̣> is used to denote *n* [n] and *ṇ* [ɳ] phonemes. In Devanagari it corresponds to *anusvara* U+0902 (see Fig. 2). For examples: **𑌕𑌃𑌃𑌃𑌃** *Mānāklen* ‘Tomorrow’, **𑌕𑌃𑌃𑌃** *Mānsāwā* ‘Bless’ and **𑌕𑌃𑌃𑌃** *Pancāyet* ‘Panchayat’, etc.

Nasalization mark [̃] is denoted by SIGN TONPI <̣̣> in the script (see Fig. 2). It corresponds in Devanagari to *candrabindu* U+0901. For example: **𑌕𑌃𑌃𑌃** *Chōwā* ‘Bird’, **𑌕𑌃𑌃𑌃** *Yāsāwā* ‘Curse’ and **𑌕𑌃𑌃𑌃** *Chēiwā* ‘Brother’.

See Fig. 2, 18a, 18b, 18c, 22, 28.

3.6.2 Sign Visarga <̣̣̣>

Glottal Stop [ʔ] phoneme of the script is represented by SIGN VISARGA <̣̣̣>. It is denoted in Devanagari by *visarga* U+0903. The Glottal stop is sometimes shown by <̣̣̣> instead of <̣̣̣> (see Fig. 2, 17e, 27). For example: **𑌕𑌃𑌃𑌃** or **𑌕𑌃𑌃𑌃** *Cāṇwā* ‘Water’, **𑌕𑌃𑌃𑌃** or **𑌕𑌃𑌃𑌃** *Āṇwā* ‘Oil’ and **𑌕𑌃𑌃𑌃** or **𑌕𑌃𑌃𑌃** *Māṇwā* ‘Black Bird’ etc.

3.6.3 Difference between Sign Virama <̣̣̣̣> and Sign Saat <̣̣̣̣̣>

Both the signs are used to mute the inherent vowel sound. There is no regular form of conjunctions or geminated letter in the script. SIGN SAAT <̣̣̣̣̣> is only used to mute the inherent vowel of the first letter of the word; all other places are represented by SIGN VIRAMA <̣̣̣̣̣>. Both the signs are represented in Devanagari by *virama* U+094D. For example: **𑌕𑌃𑌃𑌃𑌃** *Bhyāksin* ‘Vaccine’, **𑌕𑌃𑌃𑌃𑌃** *Hyānī* ‘There’, **𑌕𑌃𑌃𑌃𑌃** *Hyūni* ‘Down’, **𑌕𑌃𑌃𑌃𑌃** *Mhumā* ‘Quarrel’ **𑌕𑌃𑌃𑌃𑌃** *Sukhkhim* ‘Sikkim’, **𑌕𑌃𑌃𑌃𑌃** *Ānkā* ‘Me’ and **𑌕𑌃𑌃𑌃𑌃** *Khāṇmā* ‘To go’, etc.

See Fig. 17a, 17b, 17c, 22.

3.6.4 Sign Yupi <̣̣̣̣̣̣>

Sign Yupi is used to make abbreviations in Bantawa language (see Fig. 17d, 19b, 19c, 19d). For example: **𑌕.** is for ‘Dr.’ (Doctor), **𑌕.𑌕.𑌕.** is for ‘D.G.P.’ (Director General of Police), etc.

In legacy encodings SIGN YUPI was sometimes used with VOWEL SIGN U to form VOWEL SIGN UE <̣̣̣̣̣̣> (see Fig. 1 and 6). Since this is an abbreviation sign, using SIGN YUPI with VOWEL SIGN U to form VOWEL SIGN UE is not acceptable.

3.7 Punctuation

Kirat Rai uses DANDA </> and DOUBLE DANDA <//> at the end of the sentence (see Fig. 13, 16, 21, 22). Many Indic scripts use the *danda* and *double danda* from the Devanagari block. The Kirat Rai *danda* and *double danda* are used in a similar way to how they are used in Devanagari. However, in order to visually differentiate the *danda* from KIRAT RAI VOWEL SIGN AA <̣̣̣̣̣̣>, these are always slanted in Kirat Rai. Thus, these are proposed for encoding in the Kirat Rai block.

Kirat Rai *sign Chamri* <-> is typically used to join two different words to form compound term (see Fig. 15 and 16). It should be unified with the corresponding HYPHEN-MINUS U+002D. For example: རྩལ་བླ་མ་ ‘*Sāyā-Bun*’ Turban, etc. There are no other script-specific punctuation marks.

The following “Latin” marks are used:

., ; : ? ! :- _ \ * ‘ ’ “ ” () { } [] < >

3.8 Digits

There is a full set of decimal digits: ༠ ZERO, ༡ ONE, ༢ TWO, ༣ THREE, ༤ FOUR, ༥ FIVE, ༦ SIX, ༧ SEVEN, ༨ EIGHT, ༩ NINE (see Fig. 5a, 7, 8, 10, 11, 13, 22, 23).

4 Collation

Nasalized vowels should come before the corresponding non-nasalized vowel (and before any other consonant). An example (fictional) of how words should sort is as follows:

- a. ཅ:ཅ
- b. ཅ:ཅ
- c. ཅལ:ཅ
- d. ཅལེཅ
- e. ཅཅ
- f. ཅེེཅ
- g. ཅེེཅ
- h. ཅཅ
- i. ཅཱཅ

This sort order with *anusvara*, *tonpi*, and *visarga* sorting first has been approved by AKRS.

The collation order is as follows:

° ANUSVARA < ཱ TONPI < ཱ VISARGA < ལྷ A < ཀ KA < ཁ KHA < ག GA < ཅ GHA < ན NGA < ཅ CA < ཅ CHA < ཅ JA < ཅ JHA < ཅ NYA < ཅ TTA < ཅ TTHA < ཅ DDA < ཅ DDHA < ཅ TA < ཅ THA < ཅ DA < ཅ DHA < ཅ NA < ཅ PA < ཅ PHA < ཅ BA < ཅ BHA < ཅ MA < ཅ YA < ཅ RA < ཅ LA < ཅ VA < ཅ SA < ཅ SHA < ཅ HA < ཅ AA < ཅ I < ཅ U < ཅ UE < ཅ E < ཅ AI < ཅ O < ཅ AU < ཱ VIRAMA < ཱ SAAT < ཱ YUPI < / DANDA < // DOUBLE DANDA < ༠ DIGIT ZERO < ༡ DIGIT ONE < ༢ DIGIT TWO < ༣ DIGIT THREE < ༤ DIGIT FOUR < ༥ DIGIT FIVE < ༦ DIGIT SIX < ༧ DIGIT SEVEN < ༨ DIGIT EIGHT < ༩ DIGIT NINE

4.1 Default Unicode Collation Element Table

Contractions will automatically be added to the UCA because of canonical decompositions for AI, O and AU.

```
16D67 16D67 ; ... # KIRAT RAI VOWEL SIGN AI
16D63 16D67 ; ... # KIRAT RAI VOWEL SIGN O
16D63 16D67 16D67 ; ... # KIRAT RAI VOWEL SIGN AU
16D69 16D67; ... # KIRAT RAI VOWEL SIGN AU
16D63 16D68; ... # KIRAT RAI VOWEL SIGN AU
```

5 Character Data

5.1 Character Properties

In the format of UnicodeData.txt:

```
16D40;KIRAT RAI SIGN ANUSVARA;Lm;0;L;;;;N;;;;;
16D41;KIRAT RAI SIGN TONPI;Lm;0;L;;;;N;;;;;
16D42;KIRAT RAI SIGN VISARGA;Lm;0;L;;;;N;;;;;
16D43;KIRAT RAI LETTER A;Lo;0;L;;;;N;;;;;
16D44;KIRAT RAI LETTER KA;Lo;0;L;;;;N;;;;;
16D45;KIRAT RAI LETTER KHA;Lo;0;L;;;;N;;;;;
16D46;KIRAT RAI LETTER GA;Lo;0;L;;;;N;;;;;
16D47;KIRAT RAI LETTER GHA;Lo;0;L;;;;N;;;;;
16D48;KIRAT RAI LETTER NGA;Lo;0;L;;;;N;;;;;
16D49;KIRAT RAI LETTER CA;Lo;0;L;;;;N;;;;;
16D4A;KIRAT RAI LETTER CHA;Lo;0;L;;;;N;;;;;
16D4B;KIRAT RAI LETTER JA;Lo;0;L;;;;N;;;;;
16D4C;KIRAT RAI LETTER JHA;Lo;0;L;;;;N;;;;;
16D4D;KIRAT RAI LETTER NYA;Lo;0;L;;;;N;;;;;
16D4E;KIRAT RAI LETTER TTA;Lo;0;L;;;;N;;;;;
16D4F;KIRAT RAI LETTER TTHA;Lo;0;L;;;;N;;;;;
16D50;KIRAT RAI LETTER DDA;Lo;0;L;;;;N;;;;;
16D51;KIRAT RAI LETTER DDHA;Lo;0;L;;;;N;;;;;
16D52;KIRAT RAI LETTER TA;Lo;0;L;;;;N;;;;;
16D53;KIRAT RAI LETTER THA;Lo;0;L;;;;N;;;;;
16D54;KIRAT RAI LETTER DA;Lo;0;L;;;;N;;;;;
16D55;KIRAT RAI LETTER DHA;Lo;0;L;;;;N;;;;;
16D56;KIRAT RAI LETTER NA;Lo;0;L;;;;N;;;;;
16D57;KIRAT RAI LETTER PA;Lo;0;L;;;;N;;;;;
16D58;KIRAT RAI LETTER PHA;Lo;0;L;;;;N;;;;;
16D59;KIRAT RAI LETTER BA;Lo;0;L;;;;N;;;;;
16D5A;KIRAT RAI LETTER BHA;Lo;0;L;;;;N;;;;;
16D5B;KIRAT RAI LETTER MA;Lo;0;L;;;;N;;;;;
16D5C;KIRAT RAI LETTER YA;Lo;0;L;;;;N;;;;;
16D5D;KIRAT RAI LETTER RA;Lo;0;L;;;;N;;;;;
16D5E;KIRAT RAI LETTER LA;Lo;0;L;;;;N;;;;;
16D5F;KIRAT RAI LETTER VA;Lo;0;L;;;;N;;;;;
16D60;KIRAT RAI LETTER SA;Lo;0;L;;;;N;;;;;
16D61;KIRAT RAI LETTER SHA;Lo;0;L;;;;N;;;;;
16D62;KIRAT RAI LETTER HA;Lo;0;L;;;;N;;;;;
16D63;KIRAT RAI VOWEL SIGN AA;Lo;0;L;;;;N;;;;;
16D64;KIRAT RAI VOWEL SIGN I;Lo;0;L;;;;N;;;;;
16D65;KIRAT RAI VOWEL SIGN U;Lo;0;L;;;;N;;;;;
16D66;KIRAT RAI VOWEL SIGN UE;Lo;0;L;;;;N;;;;;
16D67;KIRAT RAI VOWEL SIGN E;Lo;0;L;;;;N;;;;;
16D68;KIRAT RAI VOWEL SIGN AI;Lo;0;L;16D67 16D67;;;;N;;;;;
16D69;KIRAT RAI VOWEL SIGN O;Lo;0;L;16D63 16D67;;;;N;;;;;
16D6A;KIRAT RAI VOWEL SIGN AU;Lo;0;L;16D69 16D67;;;;N;;;;;
16D6B;KIRAT RAI SIGN VIRAMA;Lm;0;L;;;;N;;;;;
16D6C;KIRAT RAI SIGN SAAT;Lm;0;L;;;;N;;;;;
16D6D;KIRAT RAI SIGN YUPI;Po;0;L;;;;N;;;;;
16D6E;KIRAT RAI DANDA;Po;0;L;;;;N;;;;;
16D6F;KIRAT RAI DOUBLE DANDA;Po;0;L;;;;N;;;;;
16D70;KIRAT RAI DIGIT ZERO;Nd;0;L;0;0;0;N;;;;;
16D71;KIRAT RAI DIGIT ONE;Nd;0;L;1;1;1;N;;;;;
16D72;KIRAT RAI DIGIT TWO;Nd;0;L;2;2;2;N;;;;;
16D73;KIRAT RAI DIGIT THREE;Nd;0;L;3;3;3;N;;;;;
16D74;KIRAT RAI DIGIT FOUR;Nd;0;L;4;4;4;N;;;;;
16D75;KIRAT RAI DIGIT FIVE;Nd;0;L;5;5;5;N;;;;;
16D76;KIRAT RAI DIGIT SIX;Nd;0;L;6;6;6;N;;;;;
16D77;KIRAT RAI DIGIT SEVEN;Nd;0;L;7;7;7;N;;;;;
16D78;KIRAT RAI DIGIT EIGHT;Nd;0;L;8;8;8;N;;;;;
16D79;KIRAT RAI DIGIT NINE;Nd;0;L;9;9;9;N;;;;;
```

5.2 Linebreaking

In the format of LineBreak.txt:

```
16D40..16D42 ; AL # [03] KIRAT RAI SIGN ANUSVARA .. KIRAT RAI SIGN VISARGA
16D43..16D62 ; AL # [32] KIRAT RAI LETTER A .. KIRAT RAI LETTER HA
16D63..16D6A ; AL # [08] KIRAT RAI VOWEL SIGN AA .. KIRAT RAI VOWEL SIGN AU
16D6B..16D6D ; AL # [03] KIRAT RAI SIGN VIRAMA .. KIRAT RAI SIGN YUPI
16D6E..16D6F ; BA # [02] KIRAT RAI DANDA.. KIRAT RAI DOUBLE DANDA
16D70..16D79 ; NU # [10] KIRAT RAI DIGIT ZERO .. KIRAT RAI DIGIT NINE
```

5.3 ‘Confusable’ Characters

Below is a list of Kirat Rai characters that are ‘confusable’ with those encoded in other script blocks:

16D40 KIRAT RAI SIGN ANUSVARA	;	00B0	DEGREE SIGN
	,	02DA	RING ABOVE
16D42 KIRAT RAI SIGN VISARGA	;	0983	BENGALI SIGN VISARGA
	,	A789	MODIFIER LETTER COLON
16D4B KIRAT RAI LETTER JA	;	11088	KAITHI LETTER UU
16D4E KIRAT RAI LETTER TTA	;	096A	DEVANAGARI DIGIT FOUR
16D50 KIRAT RAI LETTER DDA	;	0909	DEVANAGARI LETTER U
16D52 KIRAT RAI LETTER TA	;	1109E	KAITHI LETTER TA
16D5C KIRAT RAI LETTER YA	;	0A9A	GUJARATI LETTER CA
16D63 KIRAT RAI VOWEL SIGN AA	;	0B3E	ORIYA VOWEL SIGN AA
	,	007C	VERTICAL LINE
		0964	DEVANAGARI DANDA
16D6B KIRAT RAI SIGN VIRAMA		02CD	MODIFIER LETTER LOW MACRON
16D6C KIRAT RAI SIGN SAAT	;	02F0	MODIFIER LETTER LOW UP ARROWHEAD
16D6D KIRAT RAI SIGN YUPI	;	02F3	MODIFIER LETTER LOW RING
		0970	DEVANAGARI ABBREVIATION SIGN
16D6E KIRAT RAI DANDA	;	2215	DIVISON SLASH
16D70 KIRAT RAI DIGIT ZERO	;	0030	DIGIT ZERO
	,		

5.4 Script Metadata

Script_Metadata

Name	Kirat Rai
Size	58
Origin Country	India
Density	1
Likely language	Bantawa
Lang_Code	bap
ID Usage	Limited Use
RTL?	No
LB letters?	No
Shaping req?	No
IME?	No
Case?	No

	16D4	16D5	16D6	16D7
0	◦ 16D40	उ 16D50	र 16D60	० 16D70
1	◌ 16D41	ङ 16D51	ॡ 16D61	१ 16D71
2	◌ 16D42	ॡ 16D52	ॢ 16D62	२ 16D72
3	३ 16D43	ॣ 16D53	। 16D63	ॣ 16D73
4	॥ 16D44	॥ 16D54	॥ 16D64	॥ 16D74
5	॥ 16D45	॥ 16D55	॥ 16D65	॥ 16D75
6	॥ 16D46	॥ 16D56	॥ 16D66	॥ 16D76
7	॥ 16D47	॥ 16D57	॥ 16D67	॥ 16D77
8	॥ 16D48	॥ 16D58	॥ 16D68	॥ 16D78
9	॥ 16D49	॥ 16D59	॥ 16D69	॥ 16D79
A	॥ 16D4A	॥ 16D5A	॥ 16D6A	
B	॥ 16D4B	॥ 16D5B	॥ 16D6B	
C	॥ 16D4C	॥ 16D5C	॥ 16D6C	
D	॥ 16D4D	॥ 16D5D	॥ 16D6D	
E	॥ 16D4E	॥ 16D5E	॥ 16D6E	
F	॥ 16D4F	॥ 16D5F	॥ 16D6F	

Various signs

- 16D40 ◦ KIRAT RAI SIGN ANUSVARA
→ 02DA ◦ ring above
- 16D41 ∷ KIRAT RAI SIGN TONPI
- 16D42 ∷ KIRAT RAI SIGN VISARGA
→ A789 ∷ modifier letter colon

Letters

- 16D43 ೀ KIRAT RAI LETTER A
• also used as a vowel carrier
- 16D44 ು KIRAT RAI LETTER KA
- 16D45 ೂ KIRAT RAI LETTER KHA
- 16D46 ೃ KIRAT RAI LETTER GA
- 16D47 ೄ KIRAT RAI LETTER GHA
- 16D48 ೅ KIRAT RAI LETTER NGA
- 16D49 ೆ KIRAT RAI LETTER CA
- 16D4A ೇ KIRAT RAI LETTER CHA
- 16D4B ೈ KIRAT RAI LETTER JA
- 16D4C ೉ KIRAT RAI LETTER JHA
- 16D4D ೊ KIRAT RAI LETTER NYA
- 16D4E ೋ KIRAT RAI LETTER TTA
- 16D4F ್ KIRAT RAI LETTER TTHA
- 16D50 ೎ KIRAT RAI LETTER DDA
- 16D51 ೏ KIRAT RAI LETTER DDHA
- 16D52 ೐ KIRAT RAI LETTER TA
- 16D53 ೑ KIRAT RAI LETTER THA
- 16D54 ೒ KIRAT RAI LETTER DA
- 16D55 ೓ KIRAT RAI LETTER DHA
- 16D56 ೔ KIRAT RAI LETTER NA
- 16D57 ೕ KIRAT RAI LETTER PA
- 16D58 ೖ KIRAT RAI LETTER PHA
- 16D59 ೗ KIRAT RAI LETTER BA
- 16D5A ೘ KIRAT RAI LETTER BHA
- 16D5B ೙ KIRAT RAI LETTER MA
- 16D5C ೚ KIRAT RAI LETTER YA
- 16D5D ೛ KIRAT RAI LETTER RA
- 16D5E ೜ KIRAT RAI LETTER LA
- 16D5F ೝ KIRAT RAI LETTER VA
- 16D60 ೞ KIRAT RAI LETTER SA
- 16D61 ೟ KIRAT RAI LETTER SHA
- 16D62 ೠ KIRAT RAI LETTER HA

Vowel signs

- 16D63 | KIRAT RAI VOWEL SIGN AA
→ 007C | vertical line
→ 0964 | devanagari danda
- 16D64 \ KIRAT RAI VOWEL SIGN I
- 16D65 Ū KIRAT RAI VOWEL SIGN U
- 16D66 ū KIRAT RAI VOWEL SIGN UE
- 16D67 ē KIRAT RAI VOWEL SIGN E
- 16D68 ēē KIRAT RAI VOWEL SIGN AI
≡ 16D67 ē 16D67 ē
- 16D69 īē KIRAT RAI VOWEL SIGN O
≡ 16D63 | 16D67 ē
- 16D6A īēē KIRAT RAI VOWEL SIGN AU
≡ 16D69 īē 16D67 ē

Various signs

- 16D6B _ KIRAT RAI SIGN VIRAMA
→ 02CD _ modifier letter low macron
- 16D6C ˘ KIRAT RAI SIGN SAAT
→ 02F0 ˘ modifier letter low up arrowhead

- 16D6D ◌ KIRAT RAI SIGN YUPI
• intended for Kirat Rai-specific abbreviations
→ 02F3 ◌ modifier letter low ring
→ 0970 ◌ devanagari abbreviation sign

Punctuation

- 16D6E / KIRAT RAI DANDA
= danda
→ 0964 | devanagari danda
- 16D6F // KIRAT RAI DOUBLE DANDA
= double danda
→ 0965 || devanagari double danda

Digits

- 16D70 ० KIRAT RAI DIGIT ZERO
- 16D71 १ KIRAT RAI DIGIT ONE
- 16D72 २ KIRAT RAI DIGIT TWO
- 16D73 ३ KIRAT RAI DIGIT THREE
- 16D74 ४ KIRAT RAI DIGIT FOUR
- 16D75 ५ KIRAT RAI DIGIT FIVE
- 16D76 ६ KIRAT RAI DIGIT SIX
- 16D77 ७ KIRAT RAI DIGIT SEVEN
- 16D78 ८ KIRAT RAI DIGIT EIGHT
- 16D79 ९ KIRAT RAI DIGIT NINE

6 Letter of Support from Akhil Kirat Rai Sangh Sikkim (AKRS)



AKHIL KIRAT RAI SANGH SIKKIM

HEAD OFFICE: GANGTOK

Branch Office:

Hotel Khambuwan Building, Central Park Namchi
Regd. No. 443/1990

Ref. No. 06/AKRSS/2021

Date: 21/07/2021

To

Dr. Deborah Anderson
Unicode Technical Director,
Unicode Technical Committee
USA

Sub:- Background of Kirat Rai script and Supporting Letter for Kirat Rai script in UCS reg:-

Respected Madam,

About Kirat Rai language and official status: Kirat is a sub-group of Sino-Tibetan family. It has Limbu and Rais. Kirat Rai language also known as Bantawa or Rai language. People from ancient Khambuwan region considered as Khambu Rai. Khambu Rai people having a common surname as Rai. Khambu Rai having 26-28 dialects like Bantawa, Khulung, Chambling, Yakkha, Khaling etc. Bantawa dialect considered as standard language for Khambu Rais. After getting official status Bantawa called as Kirat Rai or Rai language. In 1995, Kirat Rai language get official status in Sikkim and AKRS declared Kirat Rai script for Kirat Rai language in 1998. Script of Limbu and Kirat Rais derived from Old Kiranti script. Limbu script or Sirijonga Lipi previously known as Kirati Lipi.

About Kirat Rai script:- Kirat Rai script was invented by late Mahaguru Tika Ram Rai resident of Daragaon, Darjeeling, West Bengal a century ago. He wrote Simhung (Rai religious book). It is derived from Old Kiranti Lipi. That time this script called as Sumhung Lipi. Later on, in 1969 late Guru Kripasalyan Rai reintroduced this script through his "Rai Aksharko Barnamala" book. This script again rewrite and reshaped in 1999 by Late B.B. Rai of Tikpur the script as a 'Khambu Rai script' as per L2/11-105. Due to printing reason and other font issues a committee under B.B. Rai they started to reshape and modified the all the letters and Glyphs. They removed all the unnecessary letters those are not required as per Rai (Bantawa) phonology. They changed the all the diacritic marks and added Chak (Virama), Saat, Chwa (Anusvara), Tonpi, Laisom (Visarga), Yupi and Chomri (Hyphen). They set Letter SA before letter SHA. They removed letters vocalic R, vocalic RR, NNA, SSA, RRA, RHA, Ligature: KSHA, TRA, GYA. They added a new letter UE in vowel

P.T.O. —→



AKHIL KIRAT RAI SANGH SIKKIM

HEAD OFFICE: GANGTOK

Branch Office:

Hotel Khambuwan Building, Central Park Namchi
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Date: 21/07/2021

Cont.: Page 1

section. And they named this script as Kirat Rai script. Govt. of Sikkim officially registered this script as Kirat Rai script.

Now a days we are using current Kirat Rai script. Kripasalyan's Khambu Rai is not using anymore and there is no change to use Khambu Rai script again. And we are assuring that Kirat Rai script will not revised in future. Our humble request to you and your committee to encode our Kirat Rai script in Unicode and approved by UTC. We are Kirat Rai people is looking for your support.

Thanking you

Yours sincerely

(Chandra Khaling)
President

Akhil Kirat Rai Sangh Sikkim

7 Tables

A	B	C	D	IPA	A	B	C	D	IPA
ક	ક	ઞ	અ	/a/	ઠ	ઠ	ઠ	ક	/ka/
ઞ	કૌ	ઞ	આ	/a:/	ખ	ખ	ખ	ખ	/kʰa/
ા	ા	।	ા		ગ	ગ	ગ	ગ	/ga/
ઇ	ઈ	ઞ	ઇ	/i/	ઘ	ઘ	ઘ	ઘ	/gʰa/
િ	િ	।	િ		ઙ	ઙ	ઙ	ઙ	/ŋa/
ૈ	ૈ	-	ૈ	/i:/	ચ	ચ	ચ	ચ	/ca,tʃa/
ી	ી	-	ી		છ	છ	છ	છ	/cʰa,tʃʰa/
ઊ	ઊ	ઞ	ઉ	/u/	જ	જ	જ	જ	/dʒa/
ુ	ુ	ઞ	ુ		ઝ	ઝ	ઝ	ઝ	/dʒʰa/
ઋ	ઋ	-	ઋ	/u:/	ઞ	ઞ	ઞ	ઞ	/ɲa/
ૃ	ૃ	-	ૃ		ટ	ટ	ટ	ટ	/ʈa/
ઋ	ઋ	-	ઋ	/ɪ/	ડ	ડ	ડ	ડ	/ʈʰa/
ૃ	ૃ	-	ૃ		ધ	ધ	ધ	ધ	/dʱa/
ઋ	ઋ	-	ઋ	/ɪ:/	ન	ન	ન	ન	/na/
ૃ	ૃ	-	ૃ		ત	ત	ત	ત	/ta/
-	-	ઞ	ડ	/i/	થ	થ	થ	થ	/tʰa/
-	-	ઞ	-		દ	દ	દ	દ	/da/
પ	પ	ઞ	પ	/e/	ધ	ધ	ધ	ધ	/dʰa/
ે	ે	૯	ે		ન	ન	ન	ન	/na/
પ્રે	પ્રે	ઞ	પ્રે	/ɛ/	પ	પ	પ	પ	/pa/
ૈ	ૈ	૯	ૈ		ફ	ફ	ફ	ફ	/pʰa/
ઑ	ઑ	ઞ	ઑ	/o/	બ	બ	બ	બ	/ba/
ો	ો	।	ો		ભ	ભ	ભ	ભ	/bʰa/
ઐ	ઐ	ઞ	ઐ	/au/	મ	મ	મ	મ	/ma/
ૌ	ૌ	।	ૌ		ય	ય	ય	ય	/ja/
					ર	ર	ર	ર	/ra/
					લ	લ	લ	લ	/la/
					વ	વ	વ	વ	/wa/
					શ	શ	શ	શ	/ʃa/
					ષ	ષ	-	ષ	/ʃa/
					સ	સ	ટ	સ	/sa/
					હ	હ	ઙ	હ	/ha/
					ઠ	ઠ	-	ઠ	/ʈa/
					ડ	ડ	-	ઢ	/ʈʰa/
					ધ	ધ	-	ધ	/dʱa/
					ન	ઙ	-	ન	/kʃa/
					ત્ર	શ્ર	-	ત્ર	/tra/
					જ	શ્ર	-	જ	/gia/
					ઙ	શ્ર	-	ઙ	/gia/

Table 3: Comparison table of Kripasalyan Lipi (1969) in column ‘A’, Khambu Rai (1999) in column ‘B’, Kirat Rai (2000) in column ‘C’, and Devanagari in column ‘D’. See Fig. 29, 30, 31.

[illegible]

Table 4: Comparison table of Kirat Rai in column ‘A’ and Limbu in column ‘B’.

8 Figures

राई छामारी (राई छामारी)

RAI ALPHABET

राई भाषामा नेपाली, हिन्दी, संस्कृत भाषासरह
दुई प्रकारका लिपि पाइन्छन्।

४/ झरुथरु (होपछाप) : स्वर-वर्ण (vowels)

५/ चरुथरु (चाइछाप) : व्यञ्जन-वर्ण (consonants)

झरुथरु (होपछाप) ९ वटा हुन्छन्।

अ अ	आ आ	इ/ई इ/ई
उ/ऊ उ/ऊ	उ उ	ए ए
ऐ ऐ	ओ ओ	औ औ

Figure 1: Vowels of Kirat Rai (Rai Alphabet) from *Sumhuñ Chāmārī* (सुमहुड छामारी), Sandiwa (5:2000)

ᱠᱤᱨᱤᱰ = भ औछाप = भौ = ९ (नौ अङ्क)

ᱵᱤᱨᱤᱰ = प औछाप = पौ = १० (दस अङ्क)

(-) = ᱵᱤᱨᱤᱰ = चक् - दुइ बेग्ला बेग्लै अक्षरहरू जोड़ेर एउटा शब्द बनाउँदा प्रयोग गरिने।

जस्तै : ᱵᱤᱨᱤᱰᱤᱰ = खातामा ᱵᱤᱨᱤᱰ-ᱤᱰ = जानु।

ᱤᱨᱤᱰᱤᱰ = सायाबुङ = ᱤᱨᱤᱰ-ᱤᱰ = फेटा।

ᱤᱨᱤᱰ-ᱤᱰ - साप्वा-सीन

ᱤᱨᱤᱰ- अ्	ᱤᱨᱤᱰ° अं
ᱤᱨᱤᱰ°- अँ	ᱤᱨᱤᱰः अः
ᱤᱨᱤᱰ^ अ^	

Figure 2: Various signs of Kirat Rai (SIGN YUPI not included) from ᱤᱨᱤᱰᱤᱰ ᱵᱤᱨᱤᱰ Sumhuñ Chāmārī (सुमहुङ छामारी), Sandiwa (6:2000)

राई भाषामा व्यञ्जन-वर्ण ३१ वटा छन्।

𑒧𑒻𑒟𑒱𑒪𑒲 (चाइछाप) : व्यञ्जन-वर्ण (consonants)

𑒧 क	𑒧𑒻𑒟𑒱𑒪𑒲 ख	𑒧𑒻𑒟𑒱𑒪𑒲 ग	𑒧𑒻𑒟𑒱𑒪𑒲 घ	𑒧𑒻𑒟𑒱𑒪𑒲 ङ
𑒧𑒻𑒟𑒱𑒪𑒲 च	𑒧𑒻𑒟𑒱𑒪𑒲 छ	𑒧𑒻𑒟𑒱𑒪𑒲 ज	𑒧𑒻𑒟𑒱𑒪𑒲 झ	𑒧𑒻𑒟𑒱𑒪𑒲 ञ
𑒧𑒻𑒟𑒱𑒪𑒲 ट	𑒧𑒻𑒟𑒱𑒪𑒲 ठ	𑒧𑒻𑒟𑒱𑒪𑒲 ड	𑒧𑒻𑒟𑒱𑒪𑒲 ढ	𑒧𑒻𑒟𑒱𑒪𑒲 त
𑒧𑒻𑒟𑒱𑒪𑒲 थ	𑒧𑒻𑒟𑒱𑒪𑒲 द	𑒧𑒻𑒟𑒱𑒪𑒲 ध	𑒧𑒻𑒟𑒱𑒪𑒲 न	𑒧𑒻𑒟𑒱𑒪𑒲 प
𑒧𑒻𑒟𑒱𑒪𑒲 फ	𑒧𑒻𑒟𑒱𑒪𑒲 ब	𑒧𑒻𑒟𑒱𑒪𑒲 भ	𑒧𑒻𑒟𑒱𑒪𑒲 म	𑒧𑒻𑒟𑒱𑒪𑒲 य
𑒧𑒻𑒟𑒱𑒪𑒲 र	𑒧𑒻𑒟𑒱𑒪𑒲 ल	𑒧𑒻𑒟𑒱𑒪𑒲 व	𑒧𑒻𑒟𑒱𑒪𑒲 स	𑒧𑒻𑒟𑒱𑒪𑒲 श
		𑒧𑒻𑒟𑒱𑒪𑒲 ह		

Figure 3: Consonants of Kirat Rai (Rai Alphabet) from 𑒧𑒻𑒟𑒱𑒪𑒲 𑒧𑒻𑒟𑒱𑒪𑒲 Sumhun Chāmārī (सुमहुङ छामारी), Sandiwa (6:2000)



Figure 4: Consonant chart of Kirat Rai (letter SHA not included), [courtesy: Human Resource Development Department, Govt. of Sikkim]

ॐ नमो भगवते वासुदेवाय सुम हुड छामारी राई बर्णमाला

सुम हुड छामारी राई बर्णमाला

RAI ALPHABET

अ	आ	इ/ई	उ/ऊ
उ	ए	ऐ	ओ
औ	अ्	अं	अँ
अः	अ^	अपुष्टापु	होपछाप
	अ^	स्वरबर्ण	VOWEL

अखिप - संख्या NUMBERS

१ अक	२ हवा	३ सुम	४ लु	५ डा
६ तुक	७ ए	८ रे	९ जो	० यम

Figure 5 (a): Chart of Kirat Rai vowels, signs and numerals (sign YUPI not included), [courtesy: West Bengal Khambhu Rai Development Board, Darjeeling]



Figure 5(b): Chart of Kirat Rai (Rai Alphabet) consonants, [courtesy: West Bengal Khambu Rai Development Board, Darjeeling]

आपुषुपु (Vowels)

अ	आ	इ	ऊ
ए	ऐ	ओ	औ
अं.			

आपुषुपु (Consonants)

क	ख	ग	घ	ङ
च	छ	ज	झ	
ट	ठ	ड	ढ	
त	थ	द	ध	न
प	फ	ब	भ	म
य	र	ल	व	
	श	ष		

Figure 6: Chart of Kirat Rai scripts (letter NYA and SHA not included) from आन यो चोपुपु (Rai Language Text Book-I), Rai and Rai (5:2019)

କିରାଟ

ଆ = - କିରାଟଆ	ଞ = ˆ - କିରାଟଞ
ଞ = ୩ - କିରାଟଞ	ଞ = ୧ - କିରାଟଞ
ଞ = ୧୧ - କିରାଟଞ	ଞ = ୧୧ - କିରାଟଞ
ଞ = ୧୧ - କିରାଟଞ	

କିରାଟ (Vowel Signs)

- = ଧକ	^ = ଟି
° = ଧ	: = ଟି
: = ଟି	

କିରାଟ

କିରାଟ-କିରାଟିଆ କିରାଟ କିରାଟିଆ କିରାଟିଆ କିରାଟିଆ କିରାଟିଆ
କିରାଟିଆ-କିରାଟିଆ କିରାଟିଆ କିରାଟିଆ କିରାଟିଆ କିରାଟିଆ

Figure 7: Signs of Kirat Rai scripts (sign YUPI not included) from ‘କିରାଟ ଲିପି ଲିପି Rāi Yāñ-o Chāpalāyāk ଲିପି-୨’ (Rai Language Text Book-II), Rai and Rai (28:2019)



Figure 9: Wood sculpture of Kirat Rai script [posted in a Kirat Rai Facebook group].

राई अल्फाबेट (RAI ALPHABET)				
आवाज (VOWEL)				
अ	आ	इ / ई	उ / ऊ	
अ०	अ१	अ२	अ३	
इ	ए	ऐ	ओ	
	औ			
चरित्र (CHARACTER)				
अ॒	अ॑	अ॒	अ॑	अ॒

आवाज (CONSONANT)				
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
स	ह	ळ	ॠ	ॡ

अङ्क (DIGITS)				
१	२	३	४	५
(एक)	(दुई)	(तीन)	(चार)	(पाँच)
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ
६	७	८	९	०
(छ)	(सात)	(आठ)	(नौ)	(शून्य)
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ
‘अङ्क’				
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ
अ॒क	अ॒ख	अ॒ग	अ॒घ	अ॒ङ

Figure 10: Handwritten form of Kirat Rai scripts from राई अल्फाबेट राई चामारी लचेप (Rai Alphabet Book), AKRS (2003)



SET-4

Code No. **58**

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[illegible]

Time allowed : 3 hours

Maximum Marks : 80

The question paper is divided into *four* sections :

Section A : Reading Comprehension	15 Marks
Section B : Composition (Writing)	25 Marks
Section C : Grammar	15 Marks
Section D : Literature	25 Marks

.58

1

P.T.O.

Figure 12: Front page of 'Rai' question paper in Kirat Rai script [courtesy: Central Board of Secondary Education]



Postal Regd. No. WB/SKM/01/05

பக்கங்கள்- 28

A man with glasses, wearing an orange short-sleeved shirt and a blue wristwatch, is seated and speaking into a microphone. He is gesturing with his hands. The background is slightly blurred, showing an indoor setting with a patterned cushion and some flowers.

ಶಾಲೆಯಲ್ಲಿ ಶಿಕ್ಷಣದ ಮಟ್ಟವನ್ನು ಹೆಚ್ಚಿಸುವ ಕಾರ್ಯವನ್ನು 2013 ರಲ್ಲಿ
-ಎ- ಸುಬ್ಬರಾವ್ ನಡೆಸಿದ್ದಾನೆ

29



Figure 14: A page from 'नेपाली-राई चित्रमय शब्दकोश' Nepālī-Rāī Citramay Śabdakoś, Rokdung (6:2019)

संयुक्त टाल

टाएयम = पद	टालयन = पदचिह्न
रायामन = विज्ञान	गताक = भूमिका
टाल- टाल = विधि	अयामयाम = अन्तराष्ट्रीय
मनवदन = अध्याय	यनययय = पद्धति
टालदनटाल = अध्यापन	अयय = स्वयं, आफै
टालययय = ध्वनी	टाएम = विशेषता
यन-यनक = सूक्ष्म	अयनटयय = रूपमा
उक = खण्ड	यनकनयनक = गह्वी
ययययययय = रेखा चित्र	टाम = भेद
यामय = सहयोग	यनय = रूप
टककक.य = पूर्ण	ययययय = वचन
रायकययययय = विद्वान	ययययय = संख्या
यामय = परिवार	ययययय = हिसाब
यामयामय = उप-परिवार	ययययय = वार्तालाप
यययक = विकल्प	यनयन = काल
ययययययय = लेख्यरूप	यययक = अलग
टालयययय = स्वर चिह्न	टालयययय = विभक्ति
यनयम = तरीका	यनयययय = कारण
अययययययय = अपवाद	यामक = फरक
अकयय = एकाक्षरी	यामयय = सामान्य
टालयन = चिह्न	टामयय = बाहेक
कामयय = संयोजक	ययययक = महत्त्व
यामयम = चलन	यामकययययय = सम्बन्धकारक
यययययययय = लेख्यरूप	ययययययययय = नकारात्मक
टालययययय = साहित्य	टामययय = सम्भावना
टाम = स्तर	कनययययययय = अप्रत्यक्ष रूपमा
टालययय = रिमा	टामयम = विशेषता

Figure 15: A page from 'राय यान-ओ सासेनयान सन्स राय ग्रामर बुक' for class III, IV and V, Rai (46:2011)

ପଞ୍ଚାମା

- ଟାପିଆ ଧୂଳିଆ ଟାପିଆ ଟାପିଆ



ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ଆଉ ଟାପିଆ ଟାପିଆ ପାପାଆ//
ପାପାଆପାପାଆ ପାପାଆ ପାପାଆ,
ଟାପିଆ ପାପାଆ ପାପାଆ ପାପାଆ//

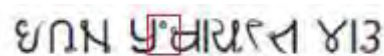
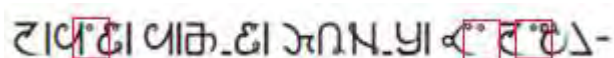
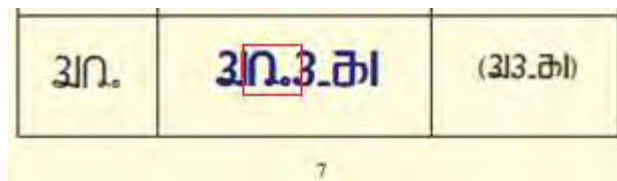
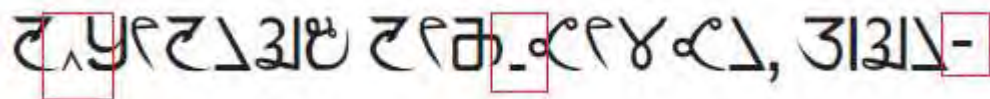
ଆଉଟାପିଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ
ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ//

ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ଆଉ ପାପାଆ ପାପାଆ ପାପାଆ//
ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ଆଉ ପାପାଆ ପାପାଆ ପାପାଆ//

ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ଆଉ ପାପାଆ ପାପାଆ//
ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ,
ଆଉ ପାପାଆ ପାପାଆ ପାପାଆ ପାପାଆ//



Figure 16: It demonstrates use of **signs** and **punctuation** of Kirat Rai from ‘ଫାପାଆ ଟାପିଆ ଟାପିଆ ଟାପିଆ Rāi Yān-o Chāpalāyāk ଫାପାଆ-୩’ (Rai Language Text Book-III), Rai and Rai (11:2019)



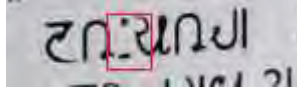


Figure 18(c): It shows the use and position of sign TONPI from རྩ་ཡཱ་འཕྲིན་ལྷན་ཁག་ Yañ Numāktum (Rai Language Text Book-VIII), page no.42.

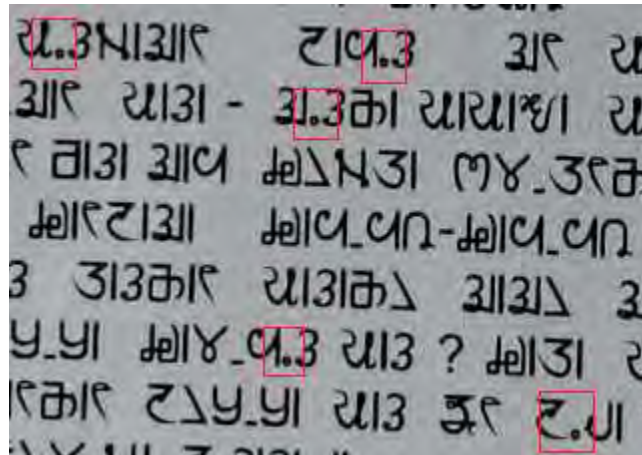


Figure 19 (a): It shows the use and position of sign YUPI as an alternative of UE from རྩ་ཡཱ་འཕྲིན་ལྷན་ཁག་ Yañ Numāktum (Rai Language Text Book-VIII), page no.43.



Figure 19 (b): It shows the use and position of sign YUPI as an alternative of UE from cover of རྩ་ཡཱ་འཕྲིན་ལྷན་ཁག་ Kirawa Yang Numaktum (Rai Language Text Book-VII).

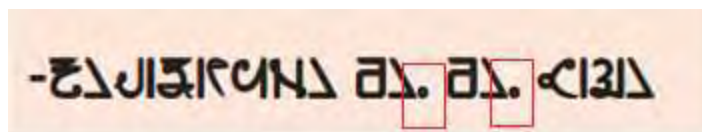


Figure 19 (c): It shows the use and position of sign YUPI as a punctuation mark from ‘འཕྲིན་ལྷན་ཁག་ རྩ་ཡཱ་འཕྲིན་ལྷན་ཁག་ Rāi Yañ-o Chāpalāyāk རྩ་ཡཱ་འཕྲིན་ལྷན་ཁག་’ (Rai Language Text Book-III), Rai and Rai (2019)

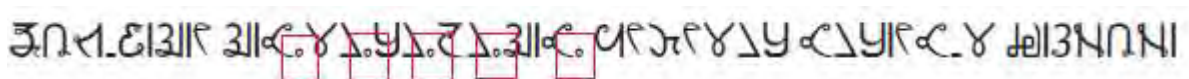


Figure 19 (d): It shows the use and position of sign YUPI as a punctuation mark. [Courtesy: Sikkim Herald]

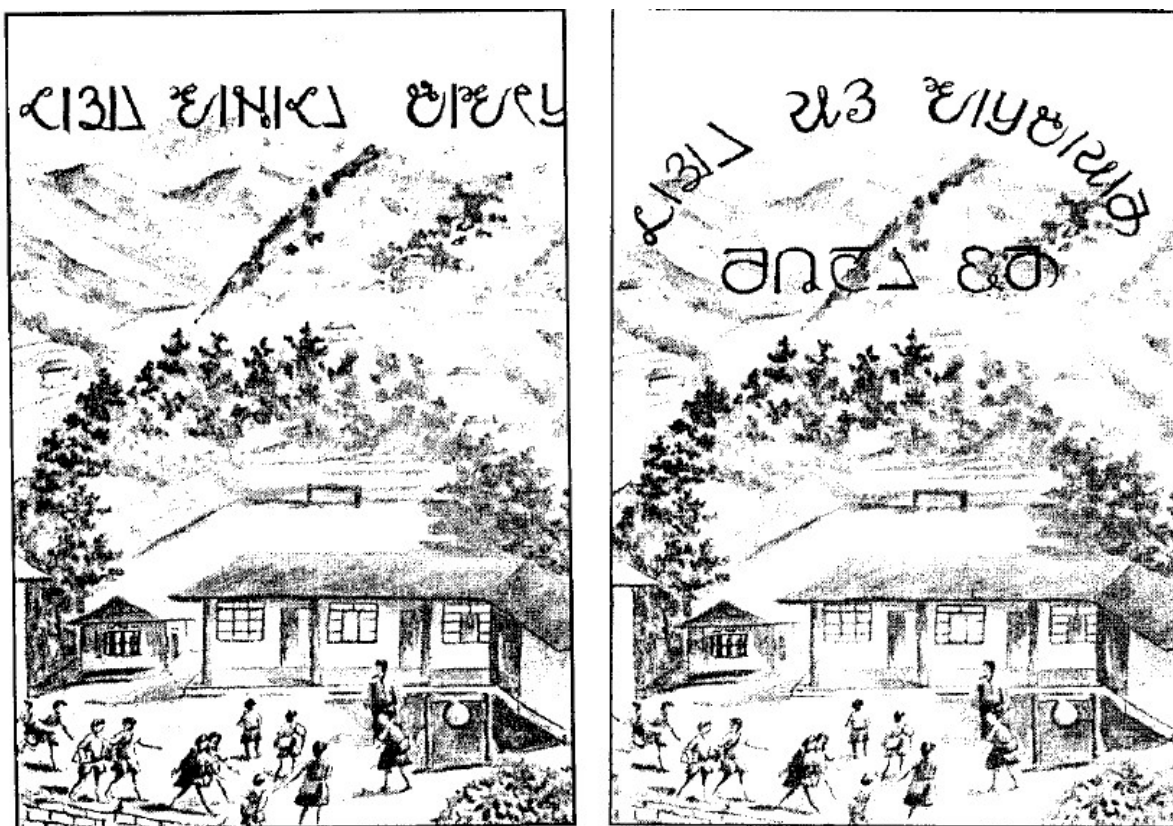


Figure 20: Covers of first two primer of Kirat Rai .i.e. *राम चामारी लक्ष्म* Rāi Chāmāri Lāchep (Left, p. 48) and *राम यान चपालायक-बुसि दक* Rāi Yan Chāpalāyāk-Busī Dak (Right, p. 49). AKRS (2003)

(3)

‘ඳිනා වර්ෂා ආප-ආපාත’
ra aa a i ya nga cha pa ka

වර්ෂා දා
ba u sa da

ආපාත-ආපාත:-

la o na ma ca gha
කුණා තාපා ඳිනා ලංග, පර්ණ-ආපාත,
kha ta anusvara
තෙල-දාසා තෙල-පා, තාපා
e saat
virama
ආපාත-ආපාත /
ga

ආපාත-ආපාත වර්ෂා ආපාත:-

ආපාත, වර්ෂා ඳිනා
ආපාත, වර්ෂා ඳිනා / danda

‘ආපාත-ආපාත ආපාත-ආපාත’

5 au
ආපාත, 5003 /
2 6 ja va 0 3

වර්ෂා ආපාත - 500 (31 ආපාත) - 2003
ආපාත-ආපාත - 500 (31 ආපාත) - 2003
ආපාත ආපාත

වර්ෂා ආපාත වර්ෂා ආපාත, 5003 :-

ttha
ආපාත, වර්ෂා ආපාත
වර්ෂා ආපාත වර්ෂා ආපාත

ආපාත ආපාත වර්ෂා ආපාත, 5003 :-

ha tta
ආපාත-ආපාත ආපාත-ආපාත
ආපාත-ආපාත, වර්ෂා ආපාත /
dda
ආපාත ආපාත:-

ආපාත, වර්ෂා ආපාත
ආපාත, වර්ෂා ආපාත /

Figure 22: Class 1. AKRS (2003)

රුපරාමය		
අක්ෂර- අංක	රුපරාමය	අංක
02	කුරුම	02
01		
05	කුරුම නිකුත්	05 - 06
2		
03	කුරුම	03
3		
03	කුරුම නිකුත්	02 - 03
4		
04	කුරුම නිකුත්	04 - 05
5		
06	කුරුම නිකුත්	06 - 07
6		
06	කුරුම නිකුත්	06
7		
08	කුරුම නිකුත්	08 - 09
8		
09	කුරුම නිකුත්	09 - 10
9		
20	කුරුම නිකුත්	20
22	කුරුම නිකුත්	22
25	කුරුම නිකුත්	25 - 26
23	කුරුම නිකුත්	23 - 24
23	කුරුම නිකුත්	23
24	කුරුම නිකුත්	24
26	කුරුම නිකුත්	26
26	කුරුම නිකුත්	26
28	කුරුම නිකුත්	28 - 29
32	කුරුම නිකුත්	32

Figure 23: Class 1. AKRS (2003)

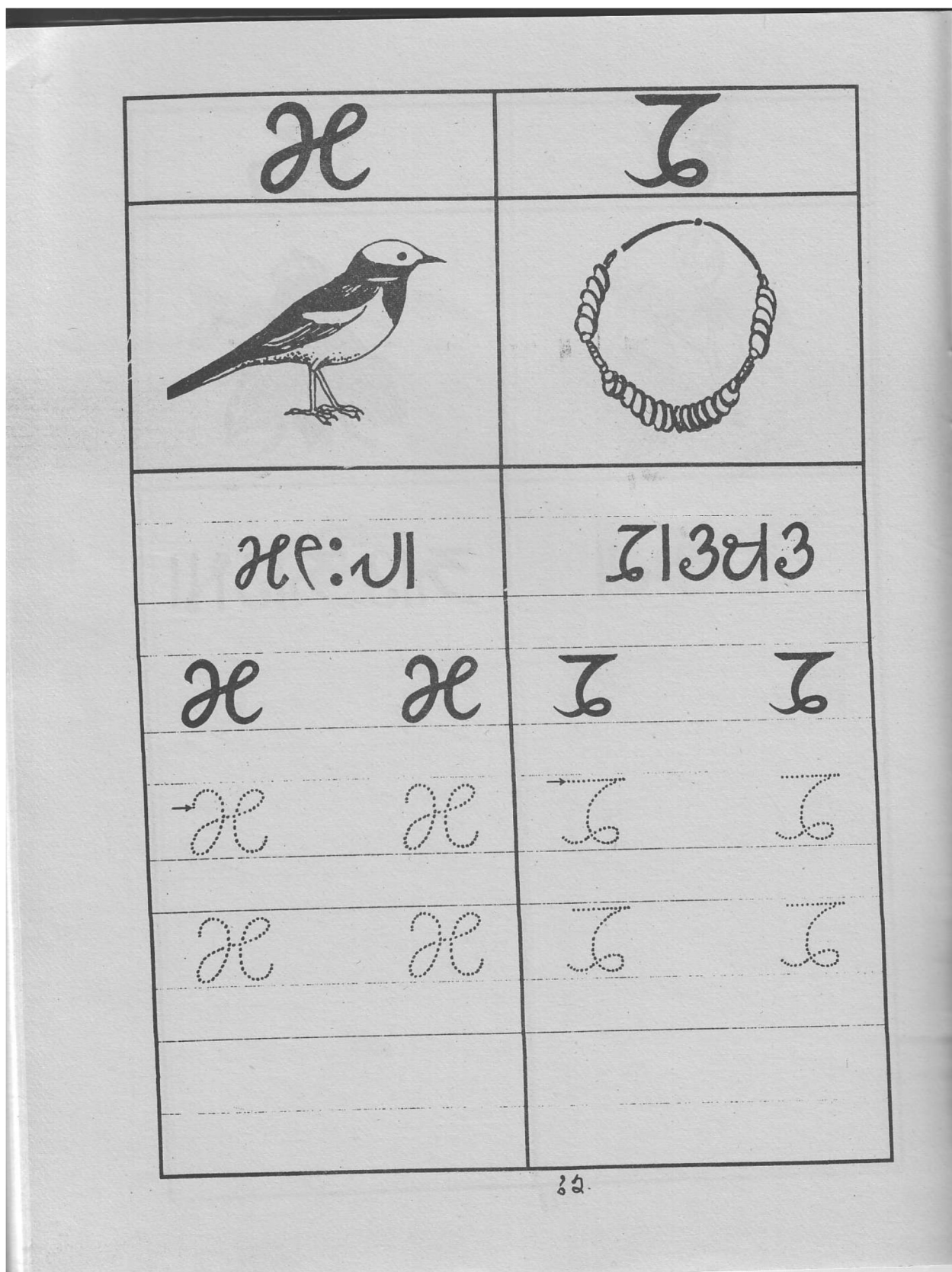


Figure 24: KIRAT RAI LETTER NYA. Class 1. AKRS (2003)

ਜਨਮਾਨ -

‘ਕ’ ਕੁਝਾਯਾਏ ਮਾ-ਟੇਲਾਯਾਏ
ਚਾ-ਪੁਰਾਏ ਖਾਧਾਨਾਏ:-

੧ ਮਾਯਾਏ ਕੁਝਾਏਲਾਏ ਫੇਰਾਕਾਏ
ਯਾਏ ?

੨ ਮਾਯਾ ਟਾਏ ਟਾਏ ਮਾ-ਪੁਰਾ ?

੩ ਮਾਯਾ ਟਾਏ ਫੇਰਾਏ ਯਾਏ ?

੪ ਟਾਏਮਾ ਮਾਏ ਯਾਏ ?

੫ ਮਾਯਾ ਕੁਝਾਏਲਾਏ ਫੇਰਾਏ ?

‘ਮ’ ਮਾਏਲਾਏ, ਚਾਏ, ਚਾਏਕਾਏ
ਪੁਰਾਏਲਾਏ, ਟਾਏ-ਟਾਏ /

ਚਾਏ ਮਾਏ ਪੁਰਾਏਲਾਏ
ਫੇਰਾਕਾ ਟਾਏਕਾ ਪੁਰਾਏਲਾਏ ਚਾਏਲਾਏ
ਕੁਝਾਏਲਾਏ ਪੁਰਾਏਲਾਏ ਚਾਏਲਾਏ
ਖਾਧਾਨਾਏ:-

੧ ਚਾਏ ਮਾਏ ਯਾਏ /

੨ ਚਾਏਲਾਏ ਚਾ ਪੁਰਾਏ /

੩ ਮਾਏ ਚਾਏਕਾ ਚਾਏ /

੪ ਚਾਏ ਕੁਝਾਏਲਾਏ ਯਾਏ /

੫ ਚਾਏਲਾਏ ਚਾਏਲਾਏ ਮਾਏ
ਪੁਰਾਏਲਾਏ //

੫੨

Figure 26: Class 1. AKRS (2003)

ཇཱཱཱཱཱཱཱ ཡཱ རཱཱཱཱཱཱཱ རཱཱཱཱཱཱ:-

ཀྱཱཱཱཱ	ཀྱཱ	ཀྱ:ཀྱཱ...ཀྱ:ཀྱཱ...
ཡཱ	ཡཱ	ཡཱ...ཡཱ...
ཡཱཱཱཱ	ཡཱ	ཡཱ...ཡཱ...
ཇཱ	ཡཱ	ཇཱཱཱཱཱཱ... ཇཱཱཱཱཱཱ...
^{sha} མཱཱཱཱཱ	ཇཱ	ཇཱ:མཱ...ཇཱ:མཱ...
མཱཱཱ	ཇཱ	མཱ:མཱཱ...མཱ:མཱཱ...
ཡཱ	ཡཱ	ཡཱ...ཡཱ...
ཡཱཱ	ཡཱ	ཡཱ:ཡཱ...ཡཱ:ཡཱ...
ཡཱཱ	ཇཱ	ཇཱཱཱཱཱཱཱཱཱཱཱ...
ཡཱཱ	ཇཱ	ཇཱཱཱཱཱཱཱཱཱཱཱཱ...
ཇཱཱཱཱ	ཀྱཱ	ཀྱཱ:ཀྱཱ...ཀྱཱ:ཀྱཱ...
^{pha} མཱཱཱཱ	མཱཱ	མཱཱ...མཱཱ...
མཱཱ	ཀྱཱ	ཀྱཱ:ཀྱཱ...ཀྱཱ:ཀྱཱ...
ཇཱཱཱཱ	ཡཱ	ཇཱཱཱཱཱཱ... ཇཱཱཱཱཱཱ...
ཇཱཱཱཱཱ	ཡཱ	ཇཱཱཱཱཱཱཱཱཱཱཱ... ཇཱཱཱཱཱཱཱཱཱཱཱ...
ཇཱཱཱ	ཡཱ	ཇཱཱཱཱཱཱ... ཇཱཱཱཱཱཱ...

མཱཱཱཱཱ:-

ཇཱཱཱཱཱ ཡཱ རཱཱཱཱཱཱཱ
 རཱཱཱཱཱཱ མཱཱཱཱཱ རཱཱཱཱཱཱཱ /

Figure 27: Class 1. AKRS (2003)

‘ ལཱ-ལཱཱ ’ (3)

ལཱཱ -

འལཱ ལཱཱཱ འལཱཱ འལཱཱ,
 ལཱཱཱཱ-འལཱཱཱ ལཱཱཱཱཱ ལཱཱཱཱ,
 ལཱཱཱ-ལཱཱཱཱ-འལཱཱཱ ལཱཱཱཱཱཱ,
 ལཱཱཱཱ ལཱཱཱཱ ལཱཱཱཱཱཱཱཱ,
 ལཱཱཱཱཱཱ ལཱཱཱ ལཱཱཱཱཱཱཱཱ,
 ལཱཱཱཱཱ ལཱཱཱ ^{jha} ལཱཱཱཱཱཱཱ //

ལཱཱཱཱཱ -

‘ ལཱཱཱཱཱ...ལཱཱཱཱཱ... ལཱཱཱཱཱ,
 ལཱཱཱཱཱཱཱཱ ལཱཱཱཱཱཱཱཱ ^{tonpi},
 ལཱཱཱཱ ལཱཱཱཱཱཱཱཱ,
 ལཱཱཱཱཱ ལཱཱཱཱཱཱཱཱ //

double danda

ལཱཱཱཱཱཱ -

‘ ལཱཱཱཱ...ལཱཱཱཱ...’ ལཱཱཱཱཱཱ,
 ལཱཱཱཱ ལཱཱཱཱཱ ལཱཱཱཱཱ,
 ལཱཱཱཱཱཱཱ ལཱཱཱཱཱཱཱཱ ^{ue},
 ལཱཱཱཱཱཱཱ ལཱཱཱཱཱཱཱཱ //

ལཱཱཱཱཱ:-

ལཱཱཱཱ ལཱ-ལཱཱ ལཱཱཱཱ
 ལཱཱཱཱཱཱ ལཱཱཱ, ལཱཱཱཱཱ ལཱ
 ལཱཱཱཱཱཱ-ལཱ ལཱ ལཱ ལཱཱཱཱཱ
 ལཱ-ལཱ? ལཱཱཱཱཱཱ /

danda

[ལཱཱཱཱཱཱ ལཱ-ལཱཱཱ ལཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ ལཱཱཱཱཱཱ]

Figure 28: Class 1. AKRS (2003)

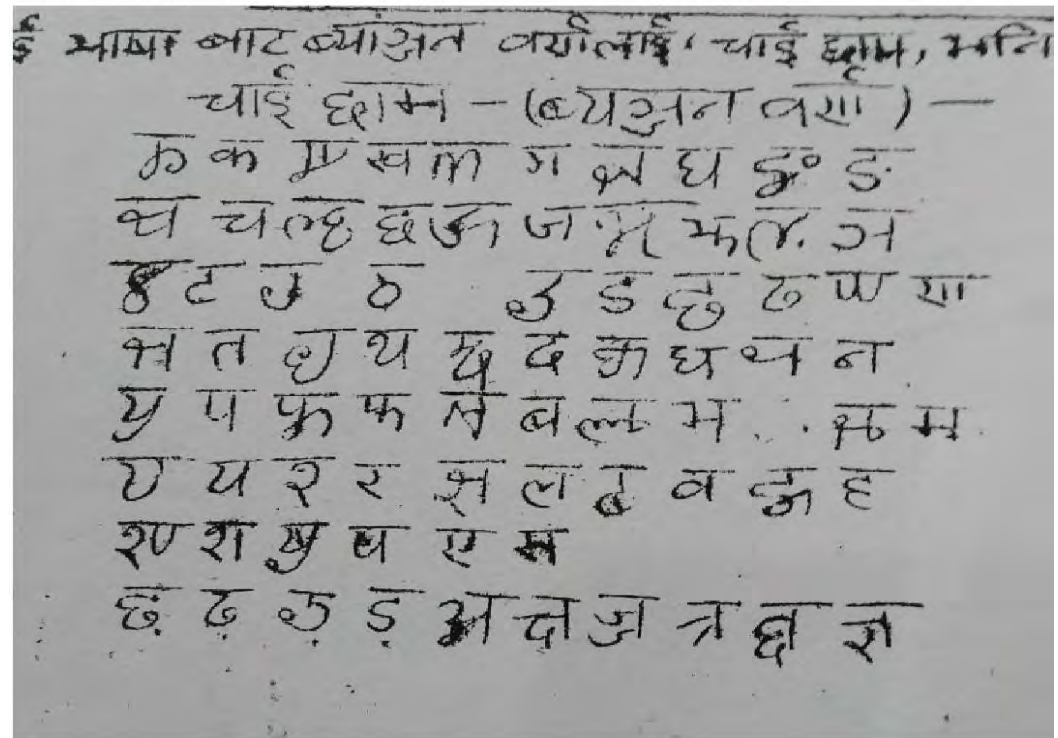
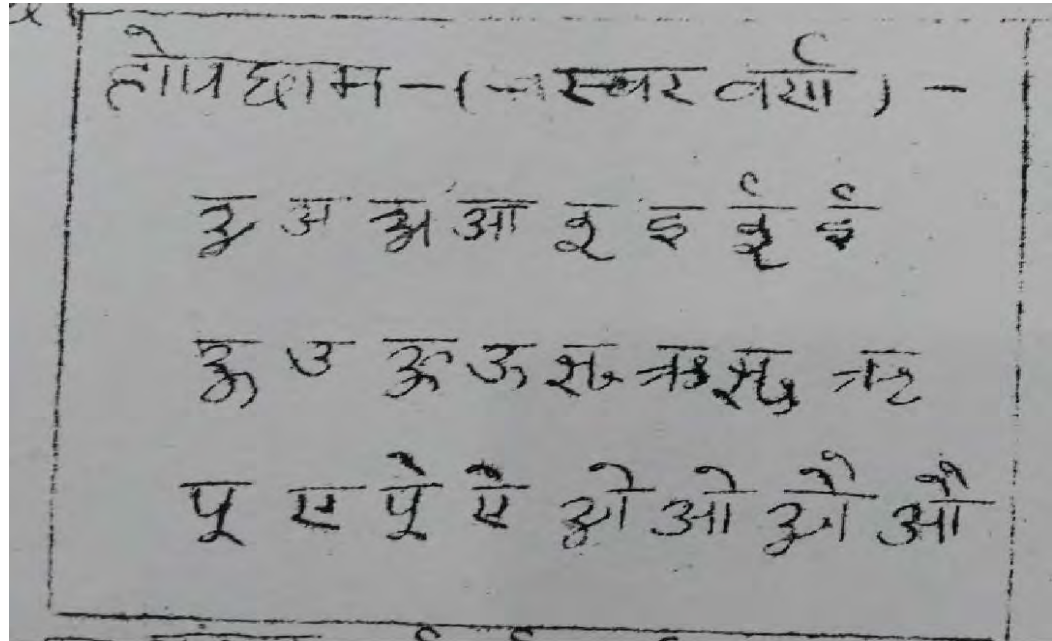


Figure 29: Picture of Kripasalyan Lipi, from 'राई अक्षरको बर्णमाला Rāi Akṣarko Baṇmālā', Kripasalyan (2:1969)

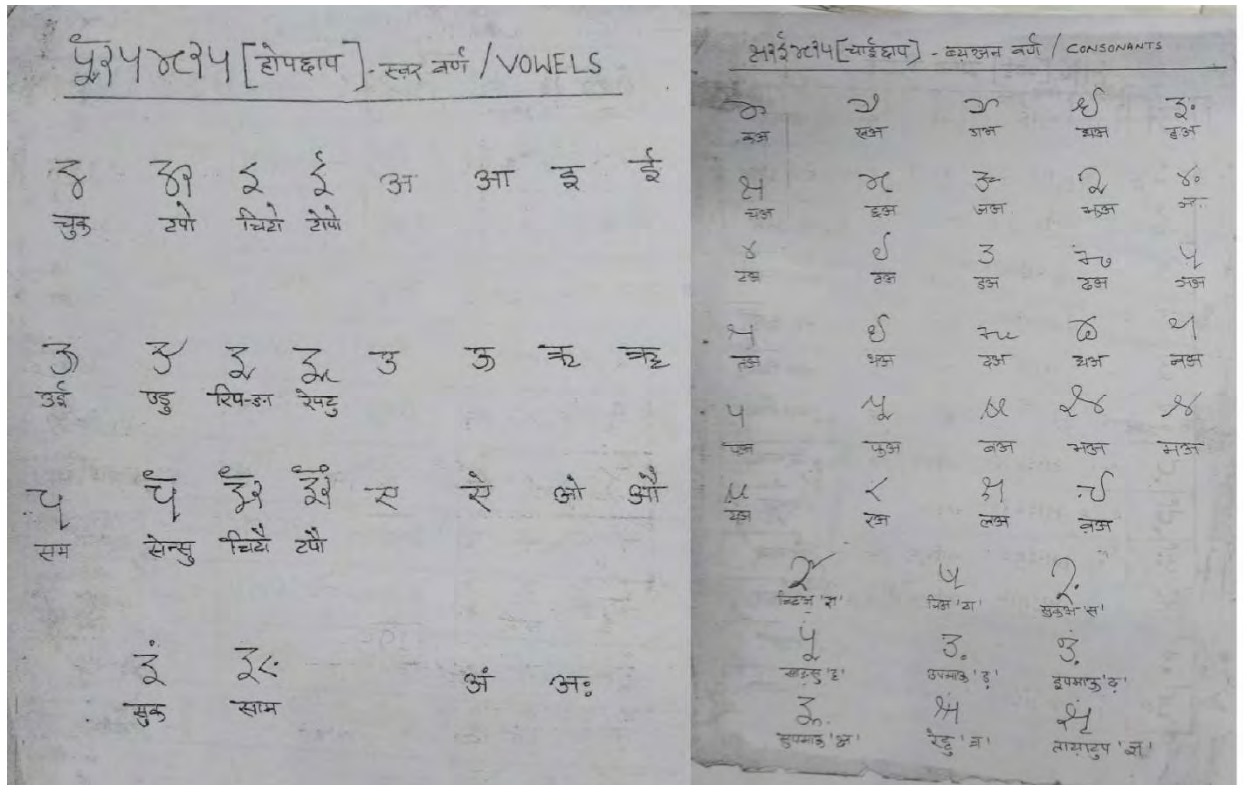


Figure 30: Picture of Khambu Rai Lipi revised by late B.B. Rai from Kripasalyan Lipi, 'पुसु किरावा चाईछाप Busu Kirāwā Cāichāp - प्राथमिक किरात राई वर्णमाला', AKRS (2, 3:1999)

The Khambu-Rai languages of 38 sub-tribes is written in Khambu-Rai script developed by Late Kripasalyan Rai in 1981-82 from the Devnagari script. The Khambu-Rai language (Bantawa language) is taught in schools up to the primary level ever since the Khambu-Rai language was recognized as one of the official languages of Sikkim in 1997.

The Khambu-Rai script has the same letters as that of Devnagari with 14 vowels, 13 vowel signs, and 38 consonants (Rai, Krishnadas in Lipi Sangalo (ed) by Limboo, R.B. 1998:54-59).

9 Acknowledgements

Proposal to Encode Kirat Rai script in the Universal Character Set

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**ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹**

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest *Roadmaps*.

A. Administrative

1. Title:	<i>Proposal to Encode Kirat Rai script in the Universal Character Set</i>		
2. Requester's name:	<i>Biswajit Mandal and Lorna Evans</i>		
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual contribution</i>		
4. Submission date:	<i>20 April 2022</i>		
5. Requester's reference (if applicable):	<i>L2/22-043R</i>		
6. Choose one of the following:			
This is a complete proposal:			<i>Y</i>
(or) More information will be provided later:			

B. Technical – General

1. Choose one of the following:			
a. This proposal is for a new script (set of characters):			<i>Y</i>
Proposed name of script:	<i>Kirat Rai</i>		
b. The proposal is for addition of character(s) to an existing block:			
Name of the existing block:	<i>58</i>		
2. Number of characters in proposal:			
3. Proposed category (select one from below - see section 2.2 of P&P document):			
A-Contemporary	<i>Y</i>	B.1-Specialized (small collection)	
C-Major extinct		B.2-Specialized (large collection)	
D-Attested extinct		E-Minor extinct	
F-Archaic Hieroglyphic or Ideographic		G-Obscure or questionable usage symbols	
4. Is a repertoire including character names provided?			<i>Y</i>
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?			<i>Y</i>
b. Are the character shapes attached in a legible form suitable for review?			<i>Y</i>
5. Fonts related:			
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>SIL</i>		
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>OFL</i>		
6. References:			
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?			<i>Y</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?			<i>Y</i>
7. Special encoding issues:			
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?			<i>Y</i>

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Y
If YES explain	<i>Preliminary version was made by Anshuman Pandey in 2011 (L2/11-145 and L2/11-105 and the related Khambu Rai L2/11-105)</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?	Y
If YES, with whom?	<i>Akhil Kirat Rai Sangh Sikkim (AKRS)</i>
If YES, available relevant documents:	<i>In this document, section 7.</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	Y
Reference:	<i>This document</i>
4. The context of use for the proposed characters (type of use; common or rare)	
Reference:	
5. Are the proposed characters in current use by the user community?	Y
If YES, where? Reference:	<i>This document</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	N
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	Y
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	Y
If YES, is a rationale for its inclusion provided?	Y
If YES, reference:	<i>This document</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	Y
If YES, is a rationale for its inclusion provided?	Y
If YES, reference:	<i>This document</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	Y
If YES, is a rationale for its inclusion provided?	Y
If YES, reference:	<i>This document</i>
11. Does the proposal include use of combining characters and/or use of composite sequences?	N
If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	
If YES, reference:	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	N
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	N
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	