

## APPENDIX

### Algorithm for the Press Release

#### Rewritten Actions (with Complementary [Phonological] Sound Substitutions)

1. “Kurt is naked below stage”

- Base IPA: [k<sup>h</sup>ɜːt ɪz 'neɪkəd bɪ'loʊ steɪdʒ]
- Complement IPA: [k ət ɪs 'neɪkɪt be'lo steɪtʃ]
- Respelling: “Kert is nekid below staich”

2. “Kurt is pulled up onto side of platform by gimps”

- Base: [k<sup>h</sup>ɜːt ɪz p<sup>h</sup>ʊld əp 'ant<sup>h</sup>u saɪd əv 'plætfɔːm baɪ ɡɪmps]
- Complement: [k ət ɪs pʊl t əp 'æŋtʊ seɪt əf 'plætfɔːm beɪ kɪmbz]
- Respelling: “Kert is pul tup antu sait af platform bai kimbz”

3. “Kurt is dressed by gimps”

- Base: [k<sup>h</sup>ɜːt ɪz dʒɪɪst baɪ ɡɪmps]
- Complement: [k ət ɪs tʃɪɪzd peɪ kɪmbz]
- Respelling: “Kert is chrezd pei kimbz”

4. “Kurt is pulled on to chair on stage”

- Base: [k<sup>h</sup>ɜːt ɪz p<sup>h</sup>ʊld ən t<sup>h</sup>u tʃɛɪ ən steɪdʒ]
- Complement: [k ət ɪs pʊl t<sup>h</sup> æŋ tʊ tʃɛɪ æŋ steɪtʃ]
- Respelling: “Kert is pul tang tu cher ang staich”

5. “Kurt is handed guitar”

- Base: [k<sup>h</sup>ɜːt ɪz 'hændəd ɡɪ't<sup>h</sup>ɑː]
- Complement: [k ət ɪs 'hæŋtət kɪ'tɑː]
- Respelling: “Kert is hangtut kitar”

6. “A cigarette is placed into Kurt’s mouth”

- Base: [ə ,sɪgə'ɪt ɪz 'pleɪst 'ɪntu kʰɜts mæʊθ]
- Complement: [ə ,kɪkə'ɪd ɪs 'plezd 'ɪntʊ k ət mæʊð]
- Respelling: “Uh kikered is plezd intu Kerts mauth”

7. “Gimps light cigarette for Kurt”

- Base: [ɡɪmps laɪt ,sɪgə'ɪt fɔɪ kʰɜt]
- Complement: [kɪmbz laɪt ,kɪkə'ɪd fɔɪ k ət]
- Respelling: “Kimbz lait kikered for Kert”

8. “Kurt adjusts the knobs on the amp with help from gimps”

- Base: [kʰɜt ə' dʒʌsts ðə nɒbz ən ðə æmp wɪθ hɛlp fɪɒm ɡɪmps]
- Complement: [k ət ə' tʃʌsts θə nɒps æŋ θə æmp wəd hɛlb vɪəm kɪmbz]
- Respelling: “Kert achutz th’ nops ang th’ amp wedh helb vrum kimbz”

9. “One gimps assist Kurt on sitting up in chair with guitar”

- Base: [wʌn ɡɪmps ə'sɪst kʰɜt ən 'sɪrɪŋ ʌp ɪn tʃɛɪ wɪθ ɡɪ'tʰaɪ]
- Complement: [wʌŋ kɪmbz ə'sɪzd k ət æŋ 'sɪrɪŋ əp ɪŋ tʃɛɪ wəd kɪ'taɪ]
- Respelling: “Wung kimbz asizd Kert ang sitring up ing cher wedh kitar”

10. “The other gimp walks to the small room and plugs in guitar pedal”

- Base: [ði 'ʌðə ɡɪmp wɔks tʰu ði smɔl ɹʊm ænd plʌgz ɪn ɡɪ'tʰaɪ 'pɛɪl]
- Complement: [ði 'ʌθə kɪmb wɔgz tʊ θi smɔl ɹʊm æŋ plʌks ɪŋ kɪ'taɪ 'bɛɪd]
- Respelling: “Thi uthor kimb wogz tu thi smol rum ang plux ing kitar bedl”

11. “Back on the stage, Kurt begins striking single chords on the guitar”

- Base: [bæk ən ðə steɪdʒ, kʰɜt bɪ'ɡɪnz 'straɪkɪŋ 'sɪŋɡəl kɔɪdz ən ðə ɡɪ'tʰaɪ]
- Complement: [bæg æŋ θə steɪʃ, k ət bɪ'kɪnz 'stɛɪɪŋ 'sɪŋkl kɔɪdz æŋ θə kɪ'taɪ]
- Respelling: “Bag ang th’ staich, Kert bikingz streging sinkl kordz ang th’ kitar”

12. “In small room, gimp presses and depresses guitar pedal”

- Base: [ɪn sməl ɹʊm, ɡɪmp 'pɹɛsɪz ænd di'pɹɛsɪz ɡɪ'tʰɑɪ 'pɛrɪ]
- Complement: [ɪŋ smət ɹʊm, kɪmp 'bɹɛsɪs æŋ ti 'bɹɛsɪs kɪ'tɑɪ 'bɛɪd]
- Respelling: “Ing smol rum, kimb bresis ang tibresis kitar bedl”

13. “Kurt begins singing into microphone”

- Base: [kʰɜt bɪ'ɡɪnz 'sɪŋɪŋ 'ɪntu 'maɪkrɪɒfəʊn]
- Complement: [k ət bɪ'kɪŋs 'sɪŋkɪŋ 'ɪntʊ 'maɪkrɒfən]
- Respelling: “Kert bikings sinking intu meikrofon”

14. “These three actions make up the performance”

- Base: [ðɪz θɹɪ 'ækʃənz meɪk ʌp ðə pə'fɔrməns]
- Complement: [θɪs tɹɛ 'ækʃəŋs meɪk əp θə pə'fɔrməŋs]
- Respelling: “This tre akshungs meik up th’ performungs”

15. “This continues for a while...”

- Base: [ðɪs kən'tɪnjuz fɔɹ ə waɪl]
- Complement: [θɪs kən'tɪŋdʒʊs vɔɹ ə weɪd]
- Respelling: “This kontinuus vor a waid”

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### Step-by-step procedure

#### Inputs

- Text: your line-break–preserving script.
- Dialect baseline: General American (GA).
- Output modes: (a) IPA after complement mapping; (b) Re-transcription.

#### Preliminaries

1. Preserve lines and punctuation; split into words.
2. G2P (broad IPA): Convert each word to a GA phonemic form, then to a predictable phonetic form by applying regular allophony (Step 3).
  - Practical note: Use a lexicon (e.g., CMU → IPA) + rules for stress, syllabification, and weak-form function words.

Assign predictable allophones (GA)

Apply these in order to get a base phonetic string for each word:

1. Aspiration: /p t k/ → [p<sup>h</sup> t<sup>h</sup> k<sup>h</sup>] in stressed syllable onsets; unaspirated [p t k] after /s/ and in codas.
2. Flapping: /t, d/ → [ɾ] between vowels when the following syllable is unstressed.
3. Dark L: [ɫ] in coda; clear [l] in onset.
4. Rhotic vowels: stressed r-colored → [ɜ̃]; unstressed → [ə̃].
5. Vowel reduction in unstressed syllables where licensed: full vowels → [ə] (or [ɪ] in some positions).
6. Dentalization before dentals: [t d n l s z] → [t̪ d̪ n̪ l̪ s̪ z̪] before [θ ð].
7. Minor coarticulation (optional): front/back variants like [k̟]/[k̠] before front/back vowels; keep as diacritics only.

Apply the Complement Operator C

For each segment in the base phonetic string, replace it with its “complement” from the tables below. This is the exact mapping I used. It has two layers:

#### A. Strict allophonic complements

- Stops (aspiration): [p<sup>h</sup>] ↔ [p], [t<sup>h</sup>] ↔ [t], [k<sup>h</sup>] ↔ [k]
- /t, d/ ↔ flap: [t] ↔ [ɾ], [d] ↔ [ɾ] (choose the *other* allophone than the one produced in Step 3)
- L: [l] ↔ [ɫ]
- R: [ɹ] ↔ [ɻ] (bunched/retroflex alternants)
- Dentalization: alveolar vs. dental pairs swap (e.g., [t] ↔ [t̪], [n] ↔ [n̪], etc.)
- Rhotic vowels (stress complement): [ɜ̃] ↔ [ə̃]
- Reduction complement: [ʌ] ↔ [ə]

#### B. Extended pairs (phoneme-level “voicing”/place flips used in your rewrite)

- Voicing flips (obstruents): [f] ↔ [v], [s] ↔ [z], [ʃ] ↔ [ʒ], [tʃ] ↔ [dʒ], [θ] ↔ [ð]
- Stop voicing/place: [b] ↔ [p], [d] ↔ [t], [g] ↔ [k]
- R-colored consonants (optional): keep as produced; only swap ɹ ↔ ɻ via 4A.

#### C. Vowel complements (as used)

- Tense ↔ lax (used as a “complement” for effect):  
[i] ↔ [ɪ], [u] ↔ [ʊ], [eɪ] ↔ [ɛ], [oʊ] ↔ [ɔ]
- Diphthong alternants:  
[aɪ] ↔ [ɛɪ], [aʊ] ↔ [æʊ], [ɔɪ] ↔ [oɪ]

- Rhotic & reduced: as in 4A: [ɜ] ↔ [ə̃], [ʌ] ↔ [ə]

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## Re-transcription [English-language (American-style) Spelling]

### Core consonants

- [p b t d k g] → p b t d k g
- [f v θ ð s z ʃ ʒ h] → f v th dh s z sh zh h
- [tʃ dʒ] → ch j
- [ɹ ɻ] → r (use “r” if you want to mark retroflex explicitly)
- [l ɫ] → l (use “l” for dark-l if you want to mark it)
- [m n ŋ] → m n ng
- [ɾ] → tt (e.g., “betting” → “bett-ing”) or “r” if you prefer American “water” → “warer”

### Core vowels

- [i ɪ eɪ ɛ æ ʌ ɔ ʊ ə ʊ̃ ʌ̃ ɜ̃ ɔ̃ ɔ̃ ɪ̃] → i ih ei e a ah aw ow uh oo uh uh er er ai au oi

### Example A: “Kurt”

1. Base GA: /kɜt/ → [kʰɜt] (aspirated, stressed rhotic)
2. Apply C: [kʰ]→[k]; [ɜ]→[ə̃]; [t] stays [t] (not flapped here) → [k ə̃ t]
3. Respelling: Kert (or “Kərt” if you want to mark schwa-r explicitly)

### Example B: “naked”

1. Base GA: /'neɪkəd/ → ['neɪkəd]
2. C vowels: [eɪ]→[ɛ]; [ə]→[ʌ] or [ɪ] → ['nɛkɪt]
3. Respelling: nekid