Neural Abstractive Summarization on the Gigaword Dataset

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Abstract

Neural attentional sequence-to-sequence models hold the promise of being able to produce high quality extractive summaries. However, when applied to abstractive summarization tasks, the models often generate repetitive and illogical sentences. A number of projects[10, 14, 2] have explored various modifications to this standard architecture with a view to improving its performance on abstractive summarization. In this paper, we begin by training the standard seq2seq with attention model and measuring its performance on the Gigaword dataset [9]. We then extend it with ideas from [10, 14, 2] in order to explore how these different techniques improve the model's performance. In particular, we implement intra-decoder attention [10] to reduce repetitions. We also train a network modified to include a pointer generator network [14] to allow the model to copy from the source sequence. We further develop a modified bottom-up abstractive summarization pipeline that is inspired by style transfer in computer vision[5]. Finally, we train a model with hierarchical attention [17] in order to model the source documents at both the word and sentence level.

1   Introduction

Text summarization can be roughly separated into two categories: extractive and abstractive summarization. Extractive summarization involves picking the most important parts of the source text to construct all of the output, while abstractive summarization aims to build a model that produces a summary more aligned with the original meaning by generating the output from a network. The traditional approach to this problem in deep learning is a sequence-to-sequence neural model with attention. However, while this usually produces summaries of reasonable quality, it often produces nonsensical summaries or summaries with many missing words.

In this paper, we investigate the performance of various variants of the sequence to sequence model on the task of generating headlines from the first few sentences of a news article. We begin by training a baseline model comprising of a unidirectional LSTM [3] encoder and decoder with global attention[8]. We then improve this model with intra-decoder attention [10] and report results. To test whether the ability to copy directly from the source document improves test set performance, we train the standard model equipped with a pointer generator network [14]. Further, we train a model augmented with hierarchical attention [17] to explore whether the ability to attend to documents at the word-level and at the sentence level improves performance. Finally, drawing inspiration from computer vision, we develop a bottom-up summarization pipeline that works by first selecting the words in the source document to focus on and then uses a modified version of style transfer[5, 15] to modify the selected content in order to produce an abstractive summary. In the paper, we report the performance of all the models using the ROUGE-1, ROUGE-2, and ROUGE-L F-1 score.

2   Related Work

Neural Abstractive Summarization models usually take the form of an encoder-decoder network with an attention mechanism. [13] present the first instance of an abstractive summarizer that performs well on a number of different datasets. In their work, they present experiments with different encoders such as a bag of words encoder and a convolutional encoder. [10] introduce an extension which they call intra-decoder attention. They implement this by training an additional set of weights that learns an alignment between the decoders own hidden states. In their paper, they demonstrate that this improves the ROUGE score. Similar to [13] we use a sequence to sequence neural summarizer but with a more basic encoder and decoder. We extend this baseline by incorporating intra-decoder attention from [10]

Pointer Networks were first introduced by [16]. They have recently been incorporated into sequence generation models in order to facilitate copying from the input sequence. [14] use a small learnable pointer mechanism that determines which words in the source sequence should be copied into the generated sequence.

Bottom-up Summarization models works in two stage: Content Selection and Text Generation. First, they pre-process the source document, selecting words that may be useful when producing a summary. Then, they focus on the selected words to generate the final summary. [2] present a bottom up summarizer that works by first training a binary sequence tagging model to generate a mask that indicates which words in the source document should be used for summarization. For the second step, [2] uses a seq2seq model with attention with the source document masked such that only words tagged as 'include' in the content selection stage are visible to the model. In this work, we implement our own sequence tagger for content selection. For text generation, we experiment with using ideas from computer vision, i.e neural style transfer[4], to produce a latent representation which we feed into an LSTM decoder to generate the final summary.

Hierarchical Attention [17] is a modification to the traditional attention mechanism that has been shown to work well on document classification tasks. It works by using two levels of attention. The first level, as with conventional attention, attends to individual words. The second level attends to sentences. [17] show that hierarchical attention allows models to capture the hierarchical structure of documents.

Neural style transfer is a technique in computer vision that produces an image "styled" using one or multiple style inputs, but depicting the same content as one or multiple "content" images. The seminal paper in this field is [1], which uses optimizes the output image to minimize a content loss and a style loss. The paper uses a pre-trained convolutional neural network that excels in image classification tasks and uses it as a feature extractor by taking the outputs of the first few layers of it. It computes the content loss as the L2 norm of the difference of these features between the content and style images and computes the style loss as the weighted average of the differences of the Gram matrices (measure correlation of feature vectors) for each layer considered.

However, this method relies on a slow optimization technique and is relatively inflexible in the variations of created images. [4] introduces a feed-forward architecture for accomplishing style transfer. It puts forward an interpretation that the mean and variance of the intermediate convolutional layers encode the style of the image. They introduced adaptive instance normalization (AdaIN) procedure involves scaling and shifting the features generated by the convolutional network so its statistics match those of the style image. The paper then feeds these normalized layers into a decoder network.

[5] builds on the AdaIN work by incorporating the style transfer ideas into a generative adversarial network that generates faces. Instead of using AdaIN layers directly for style transfer, it uses them to better represent the latent vector in the generator by mapping the latent vector through a very deep sequence of fully-connected layers before using its statistics to normalize the outputs of the convolutional layers. This paper demonstrates the effectiveness of feedforward style transfer in better creating latent representations of the features under consideration.

3 Approach

3.1 Baseline

Our baseline model consist of a simple encoder-decoder model with attention. For both the encoder and the decoder, we use a 2-layer unidirectional LSTM. Both the encoder and decoder have a hidden-state size of 500, i.e $h_t, c_t \in \mathbb{R}^{500}$. We initialize the decoder's hidden state with the encoder's last hidden state, i.e $h_n^{<e>} = h_0^{<d>}$. We use pre-trained word-vectors from GloVe [11] with the embedding size $d = 100$. We share these embeddings between the encoder and the decoder. For attention, we use global attention with a 'general' score function[8] as shown below for a single hidden state $h_i^{<e>}$ in the encoder's final layer.

$$\text{score}(h_t^{<d>}, h_j^{<e>}) = h_t^T W_a h_j^{<e>} \tag{1}$$

$$a_t = \frac{\exp\left(\text{score}(h_t^{<d>}, h_j^{<e>})\right)}{\sum_i \exp\left(\text{score}(h_t^{<d>}, h_i^{<e>})\right)} \tag{2}$$

$$c_t = \sum_i^T (a_t)_i h_i^{<e>} \tag{3}$$

To generate a word at timestep t, the decoder first concatenates c_t with h_t, the current hidden state. It then applies a linear transformation to the concatenated vector and passes the result through a $\tanh$ nonlinearity i.e $h_t^{'} = \tanh\left(W_c[c_t; h_t^{<d>}]\right)$ to obtain a new hidden state vector. From this, we obtain a distribution over the the output space as follows, $p(y_t|y_{<t}) = \text{softmax}(W_s h_t^{'})$.

3.2 Intra-Decoder Attention

We extend the above baseline by giving the decoder the ability to attend over previously generated tokens. This is done to help reduce the incidence of repeated words or phrases [10]. In addition to the global attention between the encoder and the decoder, we train a new attention mechanism between the current decoder hidden time step $h_t^{<d>}$ and the decoder's previous time step $h_{0...t-1}^{<d>}$. We use equations (1), (2), (3) above –with different matrices, to obtain the context vector then when calculating $h_t^{'}$ we concatenate the intra_attention context vector with c_t and $h_t^{<d>}$ i.e $h_t^{'} = \tanh\left(W_c^{'}[c_t; h_t^{<d>}; c_t^{\text{intra}}]\right)$.
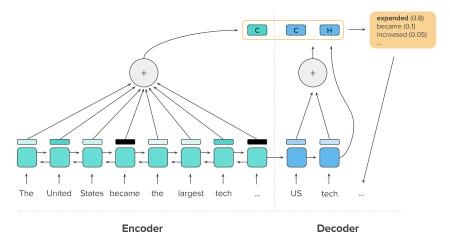

Figure 1: A schematic of how intra-decoder attention integrates with global attention courtesy of [10]

3.3 Pointer-Generator Network

This model was introduced by [12] and [14]. It helps solve the challenges of OOV and factual errors. The idea is to choose between generating a word from the fixed vocabulary or copying one from the source document at each step of the generation. If the decoder encounters an OOV word, a vanilla

generation will emit the 'UNK' token as a placeholder while a Pointer-Generator network will copy the OOV from the source text. In this model, the decoder is equipped with a 'switch' that decides between using the generator or a pointer at every time-step. The generation probability of this switch is:

$$p_{gen} = \sigma(w_{h*}^T h_t^* + w_s^T s_t + w_x^T x_t + b_{ptr}) \tag{4}$$

where x_t is the decoder input, σ is the sigmoid function, vectors w_{h*}, w_s, w_x and scalar b_{ptr} are learnable parameters. The final distribution for the output word is:

$$p(w) = p_{gen}p_{vocab}(w) + (1 - p_{gen})\sum_{i:w_i=w} a_i^t \tag{5}$$

For an OOV word, $p_{vocab} = 0$, so we end up pointing to source document.

3.4 Hierarchical Attention Networks

This model is based on the notion that some sentences are more important than others. It was initially used by[12]. It uses two Bidirectional RNNs to scan through the source text, one at word level and another at sentence level simultaneously. It calculates word-level attention using the first encoder, and sentence-level attention using second encoder. Word level attention is then re-weighted by corresponding sentence level attention as follows:

$$P^a(j) = \frac{p_a^w(j)p_s^a(s(j))}{\sum_{k=1}^{N^d} p_w^a p_s^a(s(k))} \tag{6}$$

$P^a(j)$ is the attention given to word j where it's corresponding sentence is s(j), p_a^w is the word level-attention, p_s^a is the sentence-level attention and N^d is the number of words in the source document.

3.5 Bottom-up Summarization

3.5.1 Content Selection via Sequence Tagging

To select the content to focus on in the next step, we follow the same procedure as [2]. First, we implement our own sequence tagger using a bidirectional LSTM. At every timestep t, the model predicts a binary value that indicate whether the tth token should be included in the content or not. To generate training data for the model, we use the heuristic procedure outlined by [2]. Specifically, the source document $x = x_1, x_2 \ldots x_n$ is first aligned with the gold summary $y = y_1, y_2, \ldots y_m$. Then, a token x_i is said to be copied if:

1. It is part of the longest possible sub-sequence of tokens $s = x_{i-j:i:i+k}$, for integers $j \leq i$; $k \leq (n - i)$, if $s \in x$ and $s \in y$ [2]
2. There exists no earlier sequence u with $s = u$ [2]

Source Document
the german engineering giant siemens is working on a revamped version of its defective <unk> tram car, of which the ### units sold so far worldwide are being recalled owing to a technical fault, a company spokeswoman said on tuesday.
Reference Summary
siemens working on new version of faulty <unk> tram
Selected Content
0, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0

Figure 2: Example result from tagging the source document.

We incorporate our sequence tagger into the pipeline from [10] using the code available here.
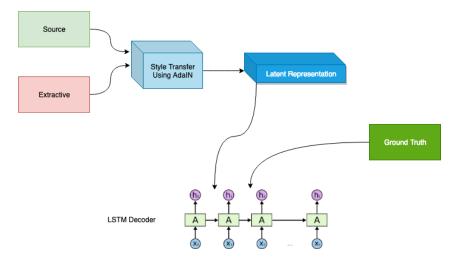
Figure 3: A flow diagram showing how the second step of our bottom-up model works.

3.5.2   Abstractive Summarization using Style Transfer

We generate a 2D feature representations of the candidate summary and of the original document using an encoder sequence model. We use the adaptive instance normalization (AdaIN) layer from [4] and a convolutional architecture inspired by [15] to style the feature representation of the original document according to the "style" imposed by the summary. This is a modified variant of the approach given by [5] in the generator network, except that we are only interested in the latent representation generated. This representation is then fed into a decoder recurrent neural network, with 2-dimensional attention being applied. Supervision is provided by the golden summaries given in the training data. The model takes in an extractive summary and the source document, and aims to improve the summary via the style transfer transformation, which makes the original document closer in style to the summary, and should bring the relatively poor extractive summary closer to the original document.

4   Experiments

4.1   Data

We use the annotated Gigaword dataset [9] to train our models. The data comprises of news articles collected from the past decade. Our article-summary pairs comprises of the first sentence of the first sentence of the original article paired with the title of the original article. The data used is pre-processed in a similar fashion to [13]. In particular, all article-summary pairs where: (1) The title contains a colon or question mark, and (2) The article has a byline or other extraneous editing marks are removed from the corpus. Further, all digits are replaced with # and all word tokens seen less than 5 times are replaced by UNK. After pre-processing, the training data comprises of 3.8 million article-summary pairs. Our validation data contains 189651 pairs. We also have a held out test corpus of 13000 pairs. The table below shows an example pair from the training data.

Source Document
thailand 's national carrier thai airways international said wednesday it has signed a code-sharing agreement with bahrain-based gulf air to meet rising demand for air travel.
Reference Summary
thai airways gulf air sign code-sharing pact

Figure 4: Example of an article-summary pair from the dataset.

4.2 Evaluation Methods

For quantitative evaluation, we use the ROUGE family of metrics [7], specifically ROUGE-1, ROUGE-2 and ROUGE-L. Furthermore, we qualitatively analyze the generated samples by manually inspecting a randomly sampled subset of the articles - in the test set, and their titles.

4.3 Experimental Details

We follow the same training procedure as [2]. In particular, for all our experiments so far, we optimize the model using plain mini-batch stochastic gradient descent with a batch size of 128. We start with an initial learning rate of 1. This stays fixed for the first five epochs. Afterwards, it is decayed by 0.5 every epoch. For regularization, we use dropout between the layers of both the encoder and the decoder with $p = 0.2$. During inference, we use beam-search decoding with a beam-size of 5. We also cap the prediction length at 100 tokens. We train the network for 10 epochs. Our framework is based off of OpenNMT[6].

4.4 Results

The table below shows ROUGE scores from our experiments so far.

Method	R-1	R-2	R-L
Baseline [6]	35.80	16.00	36.63
Baseline + Intra-Attention [10]	38.68	18.32	37.28
Baseline + Pointer Generator [14]	35.68	17.71	32.57
Baseline + Hierarchical Attention	16.42	4.774	14.94
Bottom-up Summarization	10.31	3.77	12.33

Table 1: ROUGE F1 scores on the Gigaword dataset.

So far, we see a modest improvement across all scores after incorporating intra-attention. This is in line with the findings in [10]. The results from the hierarchical attention are measured after only 2 epochs. The model is still training, as is the Bottom Up summarization model.

5 Analysis

High Quality Summary Output

Baseline

Source: jack abramoff , a former lobbyist at the center of a mushrooming political scandal in washington , on wednesday pleaded guilty in a us court in miami to defrauding lenders in a florida gambling boat deal.

Target: top republican lobbyist pleads guilty to florida fraud

Pred: lobbyist pleads guilty in miami gambling scandal.

Pointer Generator

Source: charles kennedy , leader of britain 's third-ranked liberal democrats , announced saturday he was quitting with immediate effect and would not stand in a new leadership election . us president george w. bush on saturday called for extending tax cuts adopted in his first term , which he said had bolstered economic growth .

Target: leader of britain 's third political party quits

Pred: charles kennedy announces resignation

Hierarchical Attention

Source: us first lady laura bush and us secretary of state condoleezza rice will represent the united states later this month at the inauguration of liberia 's president-elect ellen johnson sirleaf , the white house said wednesday.

Target: laura bush <unk> rice to attend sirleaf 's inauguration in liberia

Pred: us first lady to attend inauguration of liberia 's president-elect

Poor Quality Summary Output

Baseline

> **Source:** several thousand people gathered on wednesday evening on the main square in zagreb for a public draw and an open air party to celebrate the croatian capital 's second chance to host the women 's slalom world cup .
> **Target:** thousands of croatians celebrate before world cup slalom.
> **Pred:** afp world news summary
> *Bottom-up Summarization*
> **Source:** at least two people have tested positive for the bird flu virus in eastern turkey , health minister recep akdag told a news conference wednesday .
> **Target:** two test positive for bird flu virus in Turkey....
> **Pred:** new zealand tests positive for bird flu
> *Pointer Generator*
> **Source:** a top hollywood event promoter is seeking a court order to stop socialite and hotel heiress paris hilton from allegedly harassing him and threatening his life , court documents showed wednesday.
> **Target:** man seeks stay-away order against paris hilton
> **Pred:** promoter seeks court order to stop paris hilton

We note that the ROUGE scores for the model including the pointer-generator network are not substantially better than those for the baseline model. However, the generated summaries for that model are subjectively very close to the human-produced translations, as given above. We suspect that the ROUGE score is not a perfect measure of the quality of translation, because abstractive summaries tend to use words that are not present in the original source text. This is in line with what [10] uncover.

The partially-trained bottom-up summarization model demonstrates that partial training results in sub-optimal summaries. For example, summaries 11, 17, 19, 26, 60, and 83 in the appendix all do not reflect the article's true intentions, instead just making a word salad. The baseline model does slightly better, but still makes major errors on sentences 17, 19, 26, and 60 also in the appendix. The pointer generation network fixes sentences 19, 26, and 60.

Additionally, the baseline model produced many summaries that made no sense with respect to the article being summarized such as "afp world news report" and ". . ." As the models became more complex, such as with the pointer mechanism, and intra-decoder attention, these turned into intelligible, but still less sensible summaries.

For example, sentence 15 in the appendix is generated as nonsense for the baseline model, intelligible, but incomplete fragments of sentences for the pointer generator network and bottom-up summarization models.

Sentences 27, 70, 71, 88, 92, and 100 all contain gibberish or are egregiously mistranslated by the baseline model. The pointer generator network corrects 27 into something intelligible, and likewise for 70 and 71, but the summaries still do not have substantive content. Summaries 88, 92, and 100 are almost fully corrected, but evidence of the model's inability to comprehend them still remains. For the bottom-up summarization model, all of the sentences are still wrong, although 100 is corrected so that the name reads <unk>.

Article 1 is interesting in that the baseline produces a summary that carries many of the topics of the article and is grammatically sound, but conveys no information beyond the truism that a bomber is linked to terrorism. The pointer generator network correctly summarizes the article, while the bottom-up summarizer produces nonsense from the article.

6   Conclusion

In this project, we apply the encoder-decoder model with improvements such as intra-decoder attention, pointer mechanism, hierarchical attention and style transfer on the Gigaword dataset all with very promising results. Each of these models address specific shortcomings of the baseline sequence-to-sequence model. However, there are still significant challenges in solving abstractive summarization with deep learning. The ROUGE metric seems loosely correlated with the quality of the summaries. Our dataset is also confined to news articles which does not scale or generalize well or non-news articles with completely different style of writing.

Future work involves combining the separate methodologies described to produce a model that overcomes most of the shortcomings of the baseline model. Furthermore, additional training time should improve the low-quality (but still intelligible) summaries of the hierarchical attention model.

6.1 Additional Information

Proposal Grader: Abigail See

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7 Appendix

7.1 Sample Summaries

7.1.1 Target Summaries

1. pakistan police claim suspect in attack on shiite mosque is relative of al-qaida member

2. henin-hardenne clijsters reach u.s. open final

3. facing french and german opposition u.s. offers to revise u.n. resolution on iraq and annan calls for key leaders to compromise

4. henin-hardenne clijsters reach u.s. open final

5. chinese skier wins opening world cup aerial event of season

6. former welterweight champion sentenced for bank robbery

7. parliament set to hold confidence vote that could oust unpopular prime minister

8. philippine government muslim rebels hold exploratory talks in kuala lumpur

9. for those who tried to oust venezuela 's chavez a lonely exile

10. henin-hardenne clijsters reach u.s. open final

11. explosion rocks kashmir 's main fruit market six killed

12. president to give iraq address sunday night

13. taiwan independence supporters call for name change

14. six cars of a passenger train derail in northern india one killed

15. man falsely jailed after buying <unk> car campaigns to overhaul u.s. vehicle auctions

16. scarsella resigns as oceania soccer chief

17. australian kiss concert with symphony moving to big screen

18. chinese canadian skiers win opening world cup aerial events

19. inzamam stands firm against bangladesh in close match

20. canadian foreign minister visits pakistan

21. palestinian prime minister to announce his resignation official says

22. palestinian prime minister to announce his resignation official says

23. pakistan beat bangladesh in third test

24. fans to pick best-ever women 's match

25. eu nations debate way forward in israel iraq

26. inzamam shatters bangladesh hopes as pakistan records <unk> win

27. authorities say father who shot son was troubled with debt custody battle

28. bulletin palestinian prime minister resigns

29. diarrhea kills ## more people in northern india

30. palestinian prime minister submits his resignation to arafat

31. three police killed in troubled russian republic

32. short leads marines over fighters

33. explosion rocks kashmir 's main fruit market six killed

34. inzamam shatters bangladesh hopes as pakistan records <unk> win

35. webb takes lead in opening round of classic

36. four missing as most powerful storm in ## years hits bermuda

37. palestinian prime minister submits his resignation to arafat

38. explosion rocks kashmir 's main fruit market six killed

39. taiwan independence supporters call for name change

40. eu nations debate way forward in israel iraq

41. a look at nearly three years of israeli-palestinian violence with bc-me-gen israel-palestinians

42. with resignation of abbas critic of violence israel and united states lose key peace partner with bc-me-gen israel-palestinians

43. suspect in omagh bombing charged with conspiring to detonate a bomb possessing explosives

44. loeb holds lead going into final day

45. inzamam eyes another four years after guiding pakistan over bangladesh

46. west african peace troops ready deployment to liberia 's restive north

47. south korean forward lee chun-soo injured

48. palestinian prime minister submits his resignation to arafat

49. hamas militant dies of wounds from israeli helicopter strike

50. east timorese soldiers to train at indonesian military academy <unk> t. <unk> associated press writer

51. four police killed in troubled russian republic
52. omagh bombing suspect charged with conspiring to detonate bomb possessing devices for ## attacks
53. americans to bring greek tragedy home in #-## performance
54. four police killed in troubled russian republic
55. officials political analysts forecast arafat will not accept abbas resignation with bc-me-gen israel-palestinians
56. france to compensate orphans of nazi occupation
57. eight setters vs. three setters in u.s. open semifinals
58. late vice president buried after two weeks of mourning with no successor in sight
59. palestinian prime minister submits his resignation to arafat
60. host takes #-# lead in foursomes
61. a look at nearly three years of israeli-palestinian violence
62. ba computer problem causes backups at heathrow
63. kenyan cardinal <unk> dies vatican says
64. sunny weather in northern africa some heavy rains in west africa
65. defense minister says no more purges needed within army
66. kenyan cardinal <unk> dies vatican says
67. shiite cleric calls for resisting u.s. occupation strengthening militia
68. leader of northern ireland 's divided protestant party wins another close policy vote with bc-eu-gen northern ireland
69. six young men die in car accident
70. americans to bring greek tragedy home in #-## performance
71. americans to bring greek tragedy home in #-## performance
72. poland hosts major nato air exercise tests integration in alliance
73. officials political analysts forecast arafat will not accept abbas resignation
74. poll suggests ## percent of americans believe saddam linked to #-## attacks
75. shiite cleric calls for strengthening militia rumsfeld tour continues
76. palestinian prime minister submits his resignation to arafat
77. four missing as most powerful storm in ## years hits bermuda
78. al-jazeera reporter in custody in madrid his wife says
79. iranian airliner hits trees while landing in belarus no injuries
80. malawi 's government tells court to drop proceedings against al-qaida suspects
81. four missing as most powerful storm in ## years hits bermuda
82. eu nations agree to freeze hamas assets
83. suu kyi not on hunger strike despite u.s. reports red cross says
84. palestinian prime minister submits his resignation to arafat
85. <unk> mcclain lift seibu to dramatic win over daiei
86. al-jazeera reporter in custody in madrid his wife says
87. defense seeks pakistani president to testify in court over alleged assassination plot
88. foreign minister says talks between belgrade and kosovo could start this fall
89. village official four russian servicemen killed in chechnya
90. ba computer problem causes backups at heathrow
91. rumsfeld visits iraqi mass grave execution chamber
92. okubo scores twice as cerezo ties jubilo

93. france to help pakistan set up forensic laboratories

94. ### new british troops heading to iraq

95. foreign minister says talks between belgrade and kosovo could start this fall

96. cabinet ministers analysts say abbas resignation seriously undermines peace process

97. taiwan independence supporters call for name change

98. suspected ira dissident charged with omagh bomb parts ; ulster unionist chief survives vote

99. malawi 's government tells court to drop proceedings against al-qaida suspects

100. gisele mackenzie pioneering tv star singer-actress dead at ##

101. no more stadiums built only for world cup tourneys says blatter

7.1.2 Baseline Predictions

1. saudi mosque bomber linked to terrorism

2. henin-hardenne advances at us open

3. us offers to revise u.n. resolution on iraq

4. henin-hardenne advances at us open

5. china wins world cup title

6. former world welterweight champion james page gets ## years

7. palestinian parliament holds confidence vote

8. philippines rebels hold talks in malaysia

9. venezuela 's opposition leaders vow to oust chavez

10. henin-hardenne advances at us open

11. six killed as bomb explodes in kashmir

12. bush to address iraq

13. protesters demand change from taiwan

14. train derails in india

15. . . . .

16. australia 's oceania scarsella resigns

17. australian concert to get more than a year

18. china wins world cup title

19. pakistan v bangladesh scoreboard

20. canada 's foreign minister arrives in pakistan

21. abbas to announce resignation ahead of palestinian parliament

22. abbas to announce resignation ahead of palestinian parliament

23. pakistan beat bangladesh in third test

24. world cup scores

25. eu ministers discuss iraq and israel

26. pakistan v pakistan scoreboard

27. son of tommy ramirez 's son

28. palestinian pm resigns

29. ## more die in india floods

30. palestinian prime minister resigns

31. three policemen killed in dagestan

32. marines beat nippon ham #-# in pacific league

33. six killed as bomb explodes in kashmir

34. pakistan v pakistan scoreboard
35. webb pulls out of lpga tour
36. powerful hurricane hits bermuda
37. palestinian pm submits resignation
38. six killed as bomb explodes in kashmir
39. protesters demand change from taiwan
40. eu ministers discuss iraq and israel
41. israeli opposition leader visits jerusalem
42. palestinian pm says he has enough more than four months
43. suspected bomb mastermind arraigned in northern ireland
44. loeb leads rally australia
45. pakistan set for another four years
46. west african peacekeepers prepare to deploy in liberia
47. south korean forward out for several weeks
48. palestinian pm submits resignation
49. hamas militant dies in israeli strike
50. east timor soldiers to train with indonesian forces
51. four policemen on outskirts of dagestan
52. suspected ira bomb mastermind arraigned in northern ireland
53. ancient tragedy to meet ancient
54. four policemen on outskirts of dagestan
55. eu and palestinians say abbas will resign
56. french pm to receive compensation for nazis
57. ferrero and nalbandian set for .
58. kenyan vice president buried in kenya
59. palestinian pm submits resignation
60. america 's cup results
61. israeli opposition leader visits jerusalem
62. british airways goes down at airports
63. kenyan cardinal maurice michael dies
64. weather expected in northern africa
65. milosevic 's defense minister says
66. kenyan cardinal maurice michael dies
67. new iraqi shiite city 's main shiite city
68. trimble 's party wins key vote in northern ireland
69. six slovak men die in car accident
70. ancient tragedy to meet ancient
71. ancient tragedy to meet ancient
72. nato opens air exercise in poland
73. eu and palestinians say abbas will resign
74. most americans believe saddam was involved in september ## attacks
75. new iraqi shiite city 's main shiite city
76. palestinian pm submits resignation
77. powerful hurricane hits bermuda

78. al-jazeera journalist detained in madrid
79. iranian plane crashes in belarus
80. malawi government asks supreme court to halt terror suspects
81. powerful hurricane hits bermuda
82. eu to declare all all all all hamas fighters
83. myanmar 's suu kyi not on hunger strike
84. palestinian pm submits resignation
85. lions edge hawks #-# in top of top
86. al-jazeera journalist detained in madrid
87. defense lawyer asks musharraf to summon musharraf
88. . talks could begin in kosovo
89. chechen village chief killed in attacks
90. british airways goes down at airports
91. rumsfeld visits mass grave site
92. . . . iwata in j-league
93. pakistan to help pakistan fight terrorism
94. britain sends ### more troops to iraq
95. . talks could begin in kosovo
96. palestinian pm steps up efforts for peace process
97. taiwan protesters demand change from taiwan
98. suspected ira dissident faces ## charges
99. malawi says high court to halt terror suspects
100. . mackenzie mackenzie mackenzie dies
101. blatter says world cup organizers should not build new stadiums

7.1.3   Pointer Generator Network Predictions

1. suspect in mosque attack related to al-qaida
2. henin-hardenne wins u.s. open
3. u.s. offers to revise u.n. resolution on iraq
4. henin-hardenne wins u.s. open
5. chinese skier wins world cup aerial season
6. former world welterweight champion sentenced to ## years
7. palestinian parliament decides to hold confidence vote on abbas
8. philippine government rebels begin exploratory talks in malaysia
9. venezuela 's opposition promises to oust chavez
10. henin-hardenne wins u.s. open
11. bomb kills six in indian kashmir
12. bush to address nation on terrorism
13. thousands march in beijing to demand name change
14. train derails in northern india killing vendor
15. in mexico a customs auction
16. scarsella resigns as oceania football president
17. australian concert is big enough
18. chinese skier wins world cup aerial season

19. pakistan stays firm against bangladesh
20. canadian foreign minister arrives in pakistan
21. abbas to resign ahead of palestinian parliament session
22. abbas to resign ahead of palestinian parliament session
23. pakistan beats bangladesh #-# in third test
24. tennis media asked to vote
25. eu foreign ministers debate way forward in iraq
26. pakistan beats bangladesh #-# in third test
27. tommy ramirez 's cross-country
28. palestinian prime minister resigns
29. diarrhea kills ## in india s most populous state
30. palestinian prime minister resigns
31. three policemen killed in dagestan
32. lotte beats nippon ham #-#
33. bomb kills six in indian kashmir
34. pakistan beats bangladesh #-# in third test
35. webb wins lpga tour
36. powerful hurricane hits bermuda
37. palestinian prime minister resigns
38. bomb kills six in indian kashmir
39. thousands march in beijing to demand name change
40. eu foreign ministers debate way forward in iraq and israel
41. sharon 's opposition to israel
42. palestinian prime minister says he has enough to talk with arafat
43. man charged in northern ireland bomb plot
44. loeb maintains lead in rally australia
45. pakistan 's inzamam-ul-haq confident of test cricket
46. west african peacekeepers prepare for liberia
47. south korean forward chun-soo out for several weeks
48. palestinian prime minister resigns
49. hamas militant dies in israeli helicopter strike
50. east timorese soldiers to train with indonesia
51. four policemen on outskirts of dagestan
52. man charged in northern ireland bomb plot
53. modern tragedy to meet sept. ##
54. four policemen on outskirts of dagestan
55. palestinian prime minister 's resignation puts peace process on hold
56. orphans to receive compensation from france
57. ferrero nalbandian advance to semifinals
58. vice president buried in kenya
59. palestinian prime minister resigns
60. america and ireland win walker cup
61. sharon 's opposition to israel
62. british airways check-in computer systems briefly down

63. kenyan cardinal dies after long illness

64. sunny weather expected in northern africa

65. milosevic loyalists purged from army

66. kenyan cardinal dies after long illness

67. new potential flash point in iraq

68. northern ireland protestant leader wins another policy vote

69. six slovak men die in car accident

70. modern tragedy to meet sept. ##

71. modern tragedy to meet sept. ##

72. nato opens major air exercise in poland

73. palestinian prime minister 's resignation puts peace process on hold

74. poll finds saddam hussein likely involved in sept. ## attacks

75. new potential flash point in iraq

76. palestinian prime minister resigns

77. powerful hurricane hits bermuda

78. al-jazeera journalist arrested in madrid

79. iranian airliner hits trees in belarus

80. malawi orders high court to discontinue arrest warrant

81. powerful hurricane hits bermuda

82. eu to declare hamas a terrorist organization

83. suu kyi not on hunger strike red cross says

84. palestinian prime minister resigns

85. lions # hawks #

86. al-jazeera journalist arrested in madrid

87. defense lawyer asks musharraf to testify against musharraf

88. western-brokered talks could begin this fall

89. head of village killed in chechnya

90. british airways check-in computer systems briefly down

91. rumsfeld visits mass grave site

92. osaka # jubilo iwata #

93. france to help pakistan set up forensic laboratories

94. britain sending ### more soldiers to iraq

95. western-brokered talks could begin this fall

96. palestinian prime minister abbas resigns

97. tens of thousands march in taiwan to demand name change

98. suspected ira dissident faces ## charges

99. malawi orders halt to deportation of # men accused of aiding al-qaida

100. singer-actress gisele mackenzie ## dies

101. blatter calls for world cup stadiums

7.1.4 Bottom-Up Summarization Predictions

1. new york police say
2. henin advances to semifinals
3. opposition leader calls for compromise on iraq
4. henin advances to semifinals
5. china wins gold medal
6. james brown gets ## years in prison
7. palestinian prime minister to hold talks on palestinian parliament
8. philippine communist rebels meet in philippines
9. venezuela s chavez says venezuela s chavez says venezuela s economy growing
10. henin advances to semifinals
11. # killed in indian kashmir
12. bush to visit iraq
13. thousands of protesters march in china
14. train derails in eastern india
15. mexican customs officials say
16. australian prime minister to resign
17. <unk> <unk> <unk> concert
18. china wins gold medal
19. pakistan india pakistan to meet in bangladesh
20. canada 's foreign minister arrives in pakistan
21. palestinian prime minister to retire
22. palestinian prime minister to retire
23. pakistan wins toss and elects to bat
24. <unk> asks for more time
25. eu foreign ministers to discuss iraq
26. pakistan beats pakistan #-#
27. tommy suharto 's son says
28. palestinian prime minister resigns
29. monsoon floods kill ## in india
30. palestinian prime minister says arafat will resign
31. # policemen killed in dagestan
32. <unk> leads to #-# victory
33. # killed in indian kashmir
34. pakistan beats pakistan #-#
35. webb to lead lpga tour
36. british soldier killed in northern ireland
37. palestinian prime minister says arafat will resign
38. # killed in indian kashmir
39. thousands of protesters march in china
40. eu foreign ministers discuss iraq
41. suicide bomber kills ## in jerusalem
42. palestinian prime minister meets with arafat
43. northern ireland police say

44. vettel fastest in france
45. india 's cricket scoreboard
46. south african peacekeepers in liberia
47. south korea 's new leader
48. palestinian prime minister to visit arafat
49. hamas militant killed in gaza
50. indonesian troops kill ## east timorese
51. four policemen killed in shootout
52. ira suspect in northern ireland
53. new york times to meet
54. four policemen killed in shootout
55. u.s. envoy to visit israel
56. french prime minister to receive french citizenship
57. ferrero advances to quarterfinals
58. vice president to visit kenya
59. palestinian prime minister says he 's ready to resign
60. no. # ucla ##
61. suicide bomber kills ## in jerusalem
62. british airways to cut ### jobs
63. boston cardinal dies at ##
64. south africa 's south africa
65. former yugoslav army chief says
66. boston cardinal dies at ##
67. iraq 's military chief says
68. opposition leader calls for talks on ulster unionists
69. six die in slovak road accident
70. new york times to meet
71. new york times to meet
72. u.s. embassy opens in poland
73. u.s. envoy to visit israel
74. saddam 's lawyer says
75. iraq 's military chief says
76. palestinian prime minister says he 's ready to resign
77. british soldier killed in northern ireland
78. al-jazeera reporter arrested in madrid
79. iranian airliner makes emergency landing
80. malawi 's prime minister says
81. british soldier killed in northern ireland
82. eu eu to declare emergency rule
83. suu kyi meets with suu kyi
84. palestinian prime minister says he 's ready to resign
85. hawks ## cubs #
86. al-jazeera reporter arrested in madrid
87. lawyers seek to testify in murder case

88. foreign minister to visit belgrade
89. russian soldiers kill # russian soldiers
90. british airways to cut ### jobs
91. rumsfeld says saddam 's grave
92. defending champions league lead
93. france to help pakistan fight drug
94. britain to send troops to iraq
95. foreign minister to visit belgrade
96. palestinian prime minister resigns
97. in china 's <unk>
98. police arrest ## in northern ireland
99. malawi 's prime minister says
100. <unk> <unk> ## dies
101. blatter says fifa world cup stadiums

7.1.5 Articles

1. a leading suspect in a deadly attack on a shiite muslim mosque in july is related by marriage to al-qaida terrorist ramzi yousef , convicted in the #### bombing of the world trade center in new york , police said .

2. justine henin-hardenne scrambled to win a thrilling u.s. open semifinal #-# , #-# , #-# -lrb- # -rrb- past midnight friday after jennifer capriati twice served for the match .

3. facing opposition from france and germany , the united states has offered to revise a u.n. resolution aimed at getting more peacekeeping troops into iraq and secretary-general kofi annan has proposed a meeting of key foreign ministers to work out a compromise .

4. justine henin-hardenne scrambled to win a thrilling u.s. open semifinal #-# , #-# , #-# -lrb- # -rrb- past midnight friday after jennifer capriati twice served for the match .

5. chinese skier xu nannan beat olympic and world champion alisa camplin of australia on saturday to win the first gold medal of the world cup aerial season .

6. former world welterweight champion james page was sentenced friday to ## years in federal prison for bank robbery .

7. the palestinian parliament has decided to hold a confidence vote on unpopular prime minister mahmoud abbas , officials said , taking a major step toward his possible ouster .

8. philippine government and rebel moro islamic liberation front representatives began exploratory talks in malaysia on saturday to try to revive stalled negotiations on ending the decades-old muslim separatist rebellion in the southern philippines .

9. as leaders of venezuela 's opposition , their boastful promises to oust hugo chavez made them darlings of the local news media and heroes to millions fed up with the leftist president .

10. justine henin-hardenne scrambled to win a thrilling u.s. open semifinal #-# , #-# , #-# -lrb- # -rrb- past midnight friday after jennifer capriati twice served for the match .

11. a bomb exploded in the main wholesale market for fruit in indian-controlled kashmir on saturday , killing six people and injuring ## others , security forces said .

12. wanting to command a rising and contentious debate , president george w. bush will address the nation sunday on the war on terrorism and efforts to stabilize iraq .

13. waving banners and listening to rousing music , thousands of protesters marched in the capital saturday , demanding the island 's official name be changed from the " republic of china " to " taiwan .

14. a passenger train derailed in northern india on saturday , killing a vendor on board and injuring several others , a railroad spokesman said .

15. when adrian rodriguez heard a rattling noise in the #### volkswagen passat he 'd bought at a u.s. customs auction , he hoped to fix it cheap by taking it to his mechanic in tijuana , mexico .

16. australia 's basil scarsella resigned as president of the oceania football confederation on saturday after the slim passage of a vote of no-confidence in his leadership .

17. the australian concert that kiss did with a ##-piece symphony orchestra in february was big enough , but it 's about to get even bigger .

18. chinese skier xu nannan beat olympic and world champion alisa camplin of australia on saturday to win the first gold medal of the world cup aerial season .

19. pakistan batsman inzamam-ul-haq stood firm against bangladesh as the third and final test of the series heads towards a tight finish saturday on the fourth day .

20. canada 's foreign minister arrived saturday in pakistan for talks with top officials on the war on terror in afghanistan and the situation in iraq , pakistani officials said .

21. palestinian prime minister mahmoud abbas will announce his resignation ahead of a session of the palestinian parliament saturday , chief negotiator saeb erekat said .

22. palestinian prime minister mahmoud abbas will announce his resignation ahead of a session of the palestinian parliament saturday , chief negotiator saeb erekat said .

23. pakistan beat bangladesh by one wicket to win the three-match series #-# on the fourth day of the third cricket test saturday .

24. fans and members of the international tennis media are being asked to vote for the greatest women 's match played during the open era .

25. european union foreign ministers debated the way forward in iraq and israeli on saturday as peace prospects appeared ever more elusive with a power struggle in the palestinian leadership .

26. pakistan 's inzamam-ul-haq batted to a determined ### not out saturday as pakistan completed a #-# whitewash of bangladesh with a thrilling one-wicket win on the fourth day of the third test and final test .

27. bill <unk> chatted with tommy ramirez , the owner of tommy 's tex mex , as he waited in the eatery for his ##-year-old son to jog by with his cross-country team .

28. palestinian prime minister mahmoud abbas resigned saturday , said chief palestinian negotiator saeb erekat .

29. an outbreak of diarrhea following monsoon rains has killed ## more people in india 's most populous state , a government health official said saturday .

30. unpopular palestinian prime minister mahmoud abbas , weakened by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

31. three policemen were killed on saturday on the outskirts of the capital of dagestan , the commander of the republic 's interior ministry special forces said .

32. rick short went #-for-# and drove in four runs saturday to lead the lotte marines to a #-# win over the nippon ham fighters in a pacific league game at chiba marine stadium .

33. a bomb exploded in the main wholesale market for fruit in indian-controlled kashmir on saturday , killing six people and injuring ## others , security forces said .

34. pakistan 's inzamam-ul-haq batted to a determined ### not out saturday as pakistan completed a #-# whitewash of bangladesh with a thrilling one-wicket win on the fourth day of the third test and final test .

35. karrie webb is finding it more and more difficult to stay at the top of the lpga tour .

36. the most powerful hurricane to hit bermuda in ## years slammed into the british territory , unleashing deadly winds that split trees and swept trucks off roads .

37. unpopular palestinian prime minister mahmoud abbas , worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

38. a bomb exploded in the main wholesale market for fruit in indian-controlled kashmir on saturday , killing six people and injuring ## others , security forces said .

39. waving banners and listening to rousing music , thousands of protesters marched in the capital saturday , demanding the island 's official name be changed from the " republic of china " to " taiwan .

40. the european union foreign ministers debated the way forward in iraq and israel on saturday as peace prospects dimmed further with the resignation palestinian prime minister mahmoud abbas .

41. here 's a look at important events over nearly three years of renewed israeli-palestinian violence : _ sept. ## , #### : ariel sharon , then israel 's opposition leader , visits a jerusalem shrine holy to jews and muslims .

42. after just four months on the job , palestinian prime minister mahmoud abbas had enough of the constant wrangling with yasser arafat .

43. a man suspected of involvement in northern ireland 's deadliest bombing was arraigned saturday on charges of conspiring to detonate a car bomb and possessing explosive devices .

44. sebastian loeb of france maintained his lead in rally australia on saturday and will take a #.#-second edge into sunday 's final six stages of the world championship event .

45. veteran batsman inzamam-ul-haq believes he is capable of another four years of test cricket after guiding pakistan to a thrilling one-wicket victory saturday over bangladesh in their third and final test match .

46. west african peacekeepers were preparing saturday to deploy into liberia 's volatile country-side to establish their first substantial foothold outside the capital since arriving to bolster security a month ago .

47. real sociedad 's south korean forward lee chun-soo is expected to be out of action for several weeks after suffering an injury during training .

48. palestinian prime minister mahmoud abbas , increasingly unpopular and worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

49. a hamas militant died in a hospital saturday of wounds sustained in an israeli helicopter missile strike nearly two weeks ago , hospital officials said .

50. east timorese soldiers will train with forces from indonesia , its former occupier , at an indonesian military academy , an east timorese embassy official said saturday after talks between commanders from the two armies .

51. four policemen were on saturday on the outskirts of the capital of dagestan after occupants of a car they had stopped opened fire on them , the commander of the republic 's interior ministry special forces said .

52. a man suspected of involvement in northern ireland 's deadliest bombing was arraigned saturday on charges of conspiring to detonate a dissident irish republican army car bomb and possessing explosive devices used in ## attacks .

53. a modern tragedy will meet an ancient one on sept. ## .

54. four policemen were on saturday on the outskirts of the capital of dagestan after occupants of a car they had stopped opened fire on them , the commander of the republic 's interior ministry special forces said .

55. the decision by palestinian prime minister mahmoud abbas to tender his resignation puts the peace process in dangerous straits , u.s. , european and middle eastern officials and analysts said saturday .

56. orphans of deported resistance fighters and political opponents of the nazis ' world war ii occupation of france will receive compensation , prime minister jean-pierre raffarin announced saturday .

57. for juan carlos ferrero and david nalbandian , the challenge in saturday 's u.s. open semifinal is to find a reservoir of energy after playing eight sets of tennis over the last two days .

58. after two weeks of mourning that brought most of official kenya to a standstill , vice president michael wamalwa was buried on his farm in western kenya saturday following ceremonies that combined the country 's indigenous and christian traditions .

59. palestinian prime minister mahmoud abbas , increasingly unpopular and worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

60. america 's bid to win back the walker cup after two losses in a row ran into trouble on saturday when veteran rookie george <unk> and lee williams surrendered a #-up lead and britain and ireland rallied to win the foursomes #-# .

61. here 's a look at important events over nearly three years of renewed israeli-palestinian violence : _ sept. ## , #### : ariel sharon , then israel 's opposition leader , visits a jerusalem shrine holy to jews and muslims .

62. british airways ' check-in and <unk> computer systems briefly went down at airports around the world saturday , but the snag only caused noticeable trouble at heathrow airport , the carrier said .

63. kenyan cardinal maurice michael <unk> died saturday after a long illness , the vatican announced .

64. sunny to mostly sunny weather is expected across the northern third of africa on sunday .

65. loyalists of former president slobodan milosevic have been purged from the army and no more dismissals are needed to promote reforms , the defense minister said in comments published saturday .

66. kenyan cardinal maurice michael <unk> died saturday after a long illness , the vatican announced .

67. a new potential flash point was developing in iraq 's holiest shiite muslim city with the rearming and resurgence of the badr brigade , the armed wing of the supreme council for the islamic revolution in iraq which the u.s. occupation force had ordered disbanded and disarmed shortly after baghdad fell near five months ago .

68. the besieged leader of northern ireland 's major protestant party , david trimble , narrowly won another policy vote among party activists saturday , keeping alive ulster unionist party support for the peace process in this british territory .

69. six young slovak men aged ## to ## died in a saturday morning car accident in the eastern part of the country , the state-run news agency tasr reported .

70. a modern tragedy will meet an ancient one on sept. ## .

71. a modern tragedy will meet an ancient one on sept. ## .

72. military officials from ## nato member countries on saturday inaugurated a major air exercise organized for the first time in poland , one of the newest nato members and a close u.s. ally .

73. the decision by palestinian prime minister mahmoud abbas to tender his resignation puts the peace process in dangerous straits , u.s. , european and middle eastern officials and analysts said saturday .

74. nearly seven in ## americans believe it is likely that ousted iraqi leader saddam hussein was personally involved in the sept. ## attacks , says a poll out almost two years after the terrorists ' strike against the united states .

75. a new potential flash point was developing in iraq 's holiest shiite muslim city with the rearming and resurgence of the badr brigade , the armed wing of the supreme council for the islamic revolution in iraq which the u.s. occupation force had ordered disbanded and disarmed shortly after baghdad fell near five months ago .

76. palestinian prime minister mahmoud abbas , increasingly unpopular and worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

77. the most powerful hurricane to hit bermuda in ## years slammed into the british territory , unleashing deadly winds that split trees and swept trucks off roads .

78. the al-jazeera journalist arrested because of his alleged ties to osama bin laden 's terrorist group was in custody saturday in madrid while awaiting questioning by a national court judge next week , his wife confirmed .

79. an iranian airliner went off course and hit trees while landing in belarus ' capital saturday , seriously damaging the plane but causing no injuries , an aviation official said .

80. malawi 's government instructed the country 's high court to discontinue all proceedings connected to the arrest and deportation of five men who had been accused of funneling money to al-qaida , officials said saturday .

81. the most powerful hurricane to hit bermuda in ## years slammed into the british territory , unleashing deadly winds that split trees and swept trucks off roads .

82. european union foreign ministers said saturday that the bloc will declare all wings of the militant palestinian group hamas a terrorist organization , following dozens of deadly attacks in israel .

83. detained myanmar pro-democracy leader aung san suu kyi is not on a hunger strike as reported by the united states , a red cross spokesman said after officials from the organization visited her saturday .

84. palestinian prime minister mahmoud abbas , increasingly unpopular and worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .

85. <unk> <unk> hit a three-run homer in the top of the ninth inning saturday and scott mcclain belted a solo homer in the top of the ##th to lift the seibu lions to a #-# come-from-behind win over the pacific league-leading daiei hawks .

86. the al-jazeera journalist arrested because of his alleged ties to osama bin laden 's terrorist group was in custody saturday in madrid while awaiting questioning by a national court judge next week , his wife confirmed .

87. a defense lawyer asked an anti-terrorism court in this southern pakistani city on saturday to summon president gen. pervez musharraf to testify on whether there was a plot to kill him last year , lawyers said .

88. western-brokered talks focusing on " everyday problems " could begin this fall between belgrade officials and kosovo 's ethnic albanian politicians , the foreign minister said saturday .

89. the head of a village in war-wracked chechnya was killed by unknown assailants and four russian soldiers and police died in attacks , an official in the republic 's kremlin-backed administration said saturday .

90. british airways ' check-in and <unk> computer systems briefly went down at airports around the world saturday , but the snag only caused noticeable trouble at heathrow airport , the carrier said .

91. defense secretary donald h. rumsfeld visited a mass grave site and a saddam hussein execution chamber saturday , paying grim homage to atrocities of the deposed iraqi president 's rule .

92. yoshito okubo netted a pair of goals in the second half saturday as cerezo osaka came from behind to tie defending j-league champions jubilo iwata #-# away .

93. france will help pakistan set up forensic laboratories as part of its continued support to this nation in the fight against terrorism , pakistan 's interior ministry said saturday .

94. britain is sending ### more soldiers to iraq , the ministry of defense said saturday .

95. western-brokered talks focusing on " everyday problems " could begin this fall between belgrade officials and kosovo 's ethnic albanian politicians , the foreign minister said saturday .

96. palestinian prime minister mahmoud abbas ' resignation saturday further endangered the ailing israeli-palestinian peace process , officials and analysts from around the world said saturday .

97. waving green taiwanese independence flags , playing disco music and beating drums , tens of thousands of protesters paraded through the capital saturday , demanding that the island 's official name be changed from the " republic of china " to " taiwan .

98. a suspected irish republican army dissident faced ## charges saturday , including possession of key parts of the car bomb used to kill ## people in northern ireland 's deadliest explosion .

99. malawi 's government instructed the country 's high court to halt all proceedings connected to the arrest and deportation of five men who had been accused of funneling money to al-qaida , officials said saturday .

100. singer-actress gisele mackenzie , who became one of early television 's biggest stars through her appearances on " your hit parade , " has died of colon cancer .

101. fifa president sepp blatter has a message for world cup organizers : do n't build new stadiums unless you 're planning to us them after the event .

102. palestinian prime minister mahmoud abbas , increasingly unpopular and worn out by a power struggle with yasser arafat , submitted his resignation saturday , dealing a serious blow to a u.s.-backed peace plan .